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ABSTRACT

This compilation is one of a series produced through the combined efforts of the United States Office of Education/Environmental Education, coordinators for environmental education in the various states, and the ERIC Center for Science, Mathematics, and Environmental Education, in an attempt to collect and detail environmental education efforts throughout the nation. The series is assembled in geographical groupings, using combinations of the U.S. Office of Education regions. This fifth volume in the series includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Environmental education information from these states is provided under the following headings: State Environmental Education Contact; State Plan Activities; School Programs and Activities (or Environmental Education Programs Funded); University and College Programs and Activities; Groups and Agencies with Interest in Environmental Education; Resource Materials Available; and Possible Resource People. Related documents are SE 017 101--SE 017 104. (JR)

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STATE DIRECTORIES IN ENVIRONMENTAL EDUCATION

based on information supplied by

The United States Office of Environmental Education

and

State Coordinators for Environmental Education

Coordinated by

John F. Disinger and Beverly M. Lee

Volume V - U.S. Office of Education Regions VIII, IX, and X

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ERIC Information Analysis Center for
Science, Mathematics, and Environmental Education
400 Lincoln Tower
The Ohio State University
Columbus, Ohio 43210

November, 1973

SE 017 105

PREFACE

This compilation is one of a series produced through the combined efforts of the United States Office of Education/Environmental Education (USOE/EE), coordinators for environmental education in the various states, and the ERIC Center for Science, Mathematics, and Environmental Education (ERIC/SMEAC), in an attempt to collect and detail environmental education efforts throughout the nation.

The compilation was begun in 1972 as part of a contract between USOE/EE and ERIC/SMEAC. Initial input was obtained from the files of the USOE/EE and assembled by Ms. Joan M. Nicholson, Ms. Catherine Barnett, and Mr. Andrew B. Rosenberg of that office, working under the direction of Mr. Paul Cromwell, USOE/EE, and Dr. John F. Disinger, ERIC/SMEAC.

Coordinators of environmental education at the state level were asked to review the information for their respective states in detail, and have made numerous additions, deletions, and other corrections. In cases where such a review was not obtained, information based on original 1972 data from USOE/EE has been utilized.

Because the field of environmental education is dynamic, many revisions have been necessary, and will continue to be so. Therefore, inaccuracies in this and other volumes in the series will generally reflect inability to keep up with change in the field, though doubtless other errors of both commission and omission will be noted. ERIC/SMEAC will appreciate any information regarding such errors, both to keep its own files updated and for future editions of these directories.

The series is assembled in geographical groupings, using combinations of the U. S. Office of Education regions, and is available only through Educational Document Reproduction Service (EDRS). Contents of each document are listed on the next page. Also noted for each entry is recentness of update information: entries not marked with asterisks have been updated since June 1, 1973; those marked by single asterisks were reviewed by state coordinators in late 1972 or early 1973; those marked by double asterisks have not been reviewed by state coordinators.

In addition to those named above, substantive assistance has been received from: George Lowe, USOE/EE; Robert W. Howe and Robert E. Roth, ERIC/SMEAC; Mrs. Robert L. Steiner and Mrs. Stanley L. Helgeson, typists; and coordinators for environmental education in the various states, as named within the individual entries.

John F. Disinger and Beverly M. Lee
Coordinators

November, 1973

This publication was prepared pursuant to a contract with the National Institute of Education, United States Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent National Institute of Education position or policy.

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Oregon
South Dakota**
Utah
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Wyoming

* Entry updated by state coordinator between September 1, 1972 and June 1, 1973.

** No update information received from state coordinator; entry based on information supplied in Spring, 1972 by USOE/EE.

All other entries have been reviewed and updated by state coordinators for environmental education since June 1, 1973.

ALASKA

STATE E.E. CONTACT:

Ms. Jo Michalski
Specialist, Environmental Education
Alaska State Office Building
Pouch F
Juneau, Alaska 99801
Seattle Operator: (206) 583-0150
E.E.: (907) 586-5486

The Alaska Environmental Education Specialist is responsible for the integration of environmental concepts into the curriculum at all levels. She plans and establishes outdoor education areas, teacher workshops, classroom materials, and aids relating to conservation in Alaska.

The State Department of Education was awarded monies for FY 1972 from the Office of Environmental Education, Washington for development of a model Community Environmental Education workshop. The State E.E. Specialist is overseeing this project.

STATE PLAN ACTIVITIES:

Development of a state plan for environmental education is complete. The plan will serve as a guide for environmental education and as the key to further legislative action. Approved by the Alaska State Board of Education 1972.

SCHOOL PROGRAMS AND ACTIVITIES:

Greater Juneau Borough Schools
Ladd McCauley
1250 Glacier Avenue
Juneau, Alaska 99801

Ketchikan Gateway Borough Schools
Don Bailey
P.O. Box 2550
Ketchikan, Alaska 99901

Kenai Peninsula Borough Schools
Pete Larson
P.O. Box 539
Kenai, Alaska 99611

Diamond High-Mears Junior High - Anchorage Borough Schools
Mrs. Lucile Frey or Dennis Bromley
2909 West 88th
Anchorage, Alaska 99502

Jim Sumner
Ecology Information Center
West High School
1700 Hillcrest Dr.
Anchorage, Alaska 99503

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Institute of Arctic Biology
Dr. Peter Morrison, Director
University of Alaska
College, Alaska 99701
(907) 479-7661

The Institute conducts biological studies of northern and arctic life and environments in relation to zoophysiology, zoochemistry, plant physiology, and human ecology.

Geophysical Institute
Dr. K. B. Mather, Director
University of Alaska
College, Alaska 99701
(907) 479-7282

The Institute is a research branch of the University for the benefit of graduate students and faculty interested in interdisciplinary studies in geophysics. Research emphasis is threefold: high geomagnetic latitude, high geographic latitude, and tectonic activities. Areas of scientific investigation involve the talents of physicists, geologists, chemists, and engineers.

Environmental Education Symposium
Dr. Roland Stickney
University of Anchorage
Anchorage, Alaska

Dwane J. Sykes, Head
Department of Land Resources
College of Biological Sciences and Renewable Resources
University of Alaska
College, Alaska 99701

Dr. Peter C. Lent, Assistant Leader
Alaska Cooperative Wildlife Research Unit
University of Alaska
College, Alaska 99701

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Association for Environmental & Outdoor Education
Box 343
Auke Bay, Alaska 99821

An association of educators, state and federal agencies, citizens and businessmen interested in E.E. Provides scholarships and information related to environmental and outdoor education programs.

Anchorage League of Women Voters
Mrs. Joseph Merrill
1815 Bunker
Anchorage, Alaska 99503

The League has participated in many environmental programs with the students in the Environmental Living classes at West High. It has done displays at public places with student help and input, and is planning future workshops.

Sierra Club
Alaska Chapter, Box 2025
Anchorage, Alaska 99501
President: Lawrence Schultz

Alaska Historical Society
Richard Montague, President
Box 4EEE
Anchorage, Alaska 99503

Alaska Territorial Sportsmen's Association
(Alaska Wildlife Federation)
Bud Boddy, Executive Secretary
Box 761
Juneau, Alaska 99801

United States Forest Service
Mrs. Alice Cook, Education & Information Officer
709 W. 9th Street
Juneau, Alaska 99801

She is able to provide extensive lists of persons in Alaska who are currently engaged in E.E., has produced 11 videotapes which will be given to the Alaska State Museum for distribution, and is currently trying to consolidate information on all E.E. programs currently underway.

Sitka Conservation Society
P.O. Box 499
Sitka, Alaska 99835
Education Committee Chairman: Alan M. Courtright

Alaska Wilderness Council
Box 4-470
Anchorage, Alaska

Anchorage Women's Club
Mrs. Rita Hendrickson
Conservation Chariman
4407 Ireno Drive
Anchorage, Alaska 99504

Alaska State Department of Natural Resources
Division of Parks
Nat Goodhue, Outdoor Education Officer
William Hanable, Historian
323 S. 4th Avenue
Anchorage, Alaska 99501

This Department is able to supply interested persons with technical information on environmental topics. They are currently producing weekly 1/2 hour videotapes, distributed to commercial television stations. Goodhue is

especially interested in providing Alaska's schools with outdoor study areas; Hanable is able to provide assistance in the archaeological phase of E.E., and in developing programs which deal with culture as it relates to environment.

National Park Service Environmental Education
Tom Ritter
P.O. Box 2252
Anchorage, Alaska 99501

Alaska Environmental Institute
913 W. 6th Avenue
Anchorage, Alaska 99501
(907) 274-3052

Alaska Center for the Environment:
It has been designed to coordinate the efforts and activities of existing organizations and groups in the Anchorage area and throughout Alaska. It is an operating arm of the newly established Alaska Environmental Institute.

John Muir Institute for Environmental Studies
Alaskan Division
P.O. Box 1977
Anchorage, Alaska 99501

Alaska Children's Museum Association
Box 80812
College, Alaska 99701

It is a children's museum and nature center providing recreational and educational experience for Alaska children. Operation includes providing exhibits in the fields of technology, science, emphasizing natural science, and art. It provides other activities covering a broad spectrum. Has laid the groundwork for at least ten 22 minute color films about the Aleutian Complex.

Greater Anchorage Borough - Department of Environmental Quality
Mrs. Rooni L. Kinneen
327 Eagle Street, P.O. Box 968
Anchorage, Alaska 99501

National Oceanic & Atmospheric Administration
National Marine Fisheries Service
William Smoker, Director
Auke Bay Fisheries Laboratory
P.O. Box 155
Auke Bay, Alaska 99821

United States Department of Interior
Bureau of Sports Fisheries & Wildlife
Evelyn Brown, E.E. Specialist
Box 6088
Anchorage, Alaska 99502

Fred Robards
United States Game Management Agent in Charge
P.O. Box 1287
Juneau, Alaska 99801

Department of Health and Welfare
Division of Environmental Health
Pouch H
Juneau, Alaska 99801

Department of Environmental Conservation
Pouch O
Juneau, Alaska 99801
Max Brewer, Commissioner

Environmental Protection Agency
Water Quality Office
Alaska Operations
Room 9, Federal Building
605 4th Avenue
Anchorage, Alaska 99501
Director: Oscar Dickason

United States Department of Agriculture
Forest Service
Chugach National Forest
121 West Fireweed Lane
Suite 205
Anchorage, Alaska 99503
Forest Supervisor: B. A. Coster

Has available for loan to teachers, various tools used in E.E.; also staff experts in assorted areas. Instructors have been trained for teacher workshops, and have provided training sessions for teachers.

Alaksa State Department of Fish & Game
Robert Burnett, Information and Education Officer
350 Main Street
Juneau, Alaska 99801

Alaska Conservation Society
Celia M. Hunter, Executive Secretary
P.O. Box 5-192
College, Alaska 99701
479-2754

Bristol Bay Area Native Association
Box 48
Dillingham, Alaska 99576

The Association was awarded FY 1972 monies from the Office of Environmental Education, Washington for development of a process curriculum for utilization in Indian communities.

Alaska State Museum
Juneau, Alaska 99801

Contact Ms. Pat Partnow or Mr. Dan Monroe for information on Cultural/environmental program now developing educational materials.

Alaska Humanities Forum
3111 C Street
Anchorage, Alaska 99503
Gary H. Holthaus, Executive Director

RESOURCE MATERIALS AVAILABLE:

Social Studies Curriculum Development for Environmental Studies by Dennis Bromley and James Hamilton for Anchorage Borough School District. 1971.

Environmental Resource Directory: Put out by Greater Anchorage Area Borough Department of Environmental Quality.

A comprehensive list of agencies and organizations that deal with environmental problems, and the resources they have available for the public. (Resources mentioned are available through the Anchorage Borough School District Instructional Materials Center.)

Department of Education

1. "Environmental Education - Philosophy of the State Department."
2. "Environmental Education Planning Guidelines." E.E. state plan for Alaska.

3. "Interdisciplinary Environmental Education Activities." Activities developed and evaluated by Alaskan teachers. Approximately 50 available 1-73.
4. "Community Environmental Education Workshop Mode." A booklet prepared to help others develop community workshops.
5. "Alaska Environmental Education Newsletter." A monthly publication of Environmental Education Section.

POSSIBLE RESOURCE PEOPLE:

Donald Aitken
Scientific Coordinator
John Muir Institute

Jane Behlke
Elementary school science coordinator
North Star Borough School District
Fairbanks, Alaska

Dennis Bromley or Sue Usher
Co-Chairmen of the EECC of the Greater Anchorage Area School District

Harry Carter, Executive Director:
Alaska Federation of Natives

John Cook
Head of Department of Anthropology
University of Alaska
College, Alaska 99701

Dolores Dineen
Junior high school teacher, instrumental in development of integrated environmental oriented courses.

Lucille Frey
Social studies consultant for the school district. (Anchorage)

H. William Gabriel
Environmental Consultant
Corps of Engineers

Mark Ganopole
Representative, Alaska Wilderness Council

Robert Jones, Director
Aleutian Island National Wildlife Refuge

Jim Kowalsky, Director
Fairbanks Enviornmental Center

William Loyens
Professor, Department of Anthropology
University of Alaska

Dave Matlock
School District Mathematics Consultant
Anchorage

Gail Mayo
Alaska Children's Museum
Fairbanks, Alaska

She runs the Museum's nature programs and has a background in biology.

Nonan Noste
Board of Directors
Alaska Children's Museum

A forestry researcher and an official of the local group of the National Forestry Association interested in E.E.

Pamela Rich
Institute of Governmental, Economic, & Social Research
University of Alaska

Carole Schlentner
Vice President of Board of Directors
Alaska Children's Museum

A school teacher with life-long experience in nature study with children.

Howard Schuck
Alaska Director
Grumman Ecosystems Corporation

Bill Topel
Alaska Methodist University student
Anchorage, Alaska

As a student at West High, he started Student Activists for a Free Environment, and designed a literary ecology course that has been adopted as a district-wide course.

Dr. Robert Weeden
Professor of Wildlife Management/Department of Wildlife & Fisheries
University of Alaska
College, Alaska 99701
President: Alaska Conservation Society

ARIZONA

STATE E.E. CONTACT:

Hadley A. Thomas
Deputy Associate Superintendent
Department of Education
1535 W. Jefferson St.
Phoenix, Arizona 85007
(602) 271-5278

He acts as coordinator of programs and policies on local and statewide levels, investigates and tests innovative techniques in conservation education, and serves as a liaison between the school systems and state and federal agencies and the colleges and universities.

STATE PLAN ACTIVITIES:

Mr. Bob Stonoff
State Department of Education
1535 W. Jefferson St.
Phoenix, Arizona 85007

Robert R. Lovegren, Chairman
Arizona Environmental Education Advisory Council
National Park Service
1115 N. First St.
Phoenix, Arizona 85004

The Arizona Environmental Education Advisory Council is a voluntary, non-profit organization that promotes "public awareness and understanding of conservation through the public schools." Membership consists of representatives of state and federal resource agencies, state educational organizations, and other groups involved in conservation education on a statewide basis. Membership is by invitation of the State Superintendent of Public Instruction via nominations submitted by the Council. The Committee meets semi-annually.

LEGISLATION:

Impending legislation (HB 87) directs the Department of Economic Planning and Development to prepare "a master environmental plan for the use of state's natural resources and protection of the environment."

STATE FUNDING PROGRAMS:

The State Department of Education provides money through ESEA Title III and Title V. The Game and Fish Department also provides funds for conservation education.

SCHOOL PROGRAMS AND ACTIVITIES:

Rough Rock Demonstration School
Chinle, Arizona 86503
Contact: John Schneider

Received Office of Environmental Education FY 1972 monies for development of supplemental curriculum materials for use in Indian schools and communities.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Prescott College
Prescott, Arizona 86301

The Environmental Sciences Program at Prescott College is a multidisciplinary undertaking involving the Center for Man and Environment and the Center for Systems and Sciences. "It is designed to provide the student with the background necessary for examining, evaluating, and acting on current and future environmental problems and to develop the basic tools necessary for studying the ecosystem itself."

Environmental Research Laboratory
Institute of Atmospheric Physics
(Tucson International Airport)
University of Arizona
Tucson, Arizona 85706

The Laboratory is working on the development of a system for the intensive and interrelated production of power, water, and food involving coastal arid regions, solar energy and the development of large scale controlled environmental research facilities for agricultural production.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

The Conservation Education Coordinator, Arizona Game and Fish Department, produces, develops, and coordinates conservation programs and materials for schools, agencies, and organizations. Prime responsibility and emphasis are on wildlife conservation.

Southern Arizona Environmental Council
P.O. Box 49312
Tucson, Arizona 85717

A coordinating council of community organizations and individuals working together to improve public understanding of environmental problems.

Division of Air Pollution Control
4019 North 33rd Avenue
Phoenix, Arizona 85017

Association of Soil and Water Conservation Districts
P.O. Box 128
Peoria, Arizona 85345

Arizona Conservation Council
P.O. Box 1771
Scottsdale, Arizona 85252

A council of state-wide citizens organizations representing a broad spectrum of general and specific interests, including outdoor recreation, wildlife management, scenic preservation, roadside development, wilderness, ecology, and planning.

Advisory Commission on Arizona Environment
206 South 17th Avenue
Phoenix, Arizona 85007
261-7322

Published a booklet, "Earth 70's" with an audiovisual section, a record of the Decade of the Seventies Conference on Arizona environment, and many subject areas covered.

Tucson Audubon Society
P.O. Box 3981
Tucson, Arizona 85717
Contact: Charles Coston
(602) 327-5854

The Society received FY 1972 monies from the Office of Environmental Education, Washington, for pilot workshops in desert ecology for teachers and community leaders.

Arizona-Sonora Desert Museum
P.O. Box 5607
Tucson, Arizona 85703

This unique museum is a non-profit organization supported by entrance fees and memberships. It features living plants and animals of the desert and exhibits to interpret man's relationship to the desert. The museum is internationally known for its interpretative displays of native plant and animal life and has an active education program. Mrs. Doris Ready is Education Supervisor.

Conservation and Environmental Education Committee
Arizona Natural History Society

This Committee has endorsed an active and vigorous program in the Arizona Public Schools stressing the need to begin at the elementary school level."

Young Engineers & Scientists of America Foundation
P.O. Box 9066
Phoenix, Arizona 85020
Board Chairman: Americo Lazzari, P.E.
(602) 261-8325

Operation LEAP (Leadership & Education, Advancement of Phoenix)
Department of the City of Phoenix
302 West Washington
Phoenix, Arizona 85003
Executive Director: Travis Williams
Education Specialist: William Hooks
(602) 262-6815

American Institute of Landscape Architects
F. J. MacDonald, Executive Director
501 East San Juan
Phoenix, Arizona 85012
(602) 946-3691

The purpose of AILA is to further the advancement of education and skills in the art of landscape architecture as an instrument of service in the public welfare, and to promote good professional practice.

Arizonans for a Quality Environment
P.O. Box 17117
Tucson, Arizona 85710
Contact: Roy Emerick
(602) 884-1767

Arizonans in Defense of the Environment (AIDE)
309 East 14th Street
Tempe, Arizona 85281
Contact: Harry Tate
(602) 966-7638

RESOURCE MATERIALS AVAILABLE:

Environmental Education Resource Catalog: Prepared by Project Outreach in cooperation with Phoenix Union High School System and Phoenix Area Elementary School District.

Prepared for use by elementary and secondary school teachers in Phoenix. Lists materials available at the E.E. Resource Center, Phoenix, Arizona (252-3911).

POSSIBLE RESOURCE PEOPLE:

James Robinson
Neighborhood Organization Division
Project LEAP
Phoenix, Arizona

Keith Pearson, Community Development Specialist
Department of Anthropology
Northern Arizona University
Flagstaff, Arizona

Ray Tamppari
Department of Biology
Northern Arizona University
Flagstaff, Arizona

Dale Nations
Department of Geology
Northern Arizona University
Flagstaff, Arizona

Tim O'Keefe
Department of Forestry
Northern Arizona University
Flagstaff, Arizona

John Allar
Coconino County Public Health
Environmental Services

Eric Ealthers
Director of Environmental Studies
Museum of Northern Arizona
Flagstaff, Arizona

Charles L. Douglas
Center for Man & Enviornment
Prescott College
Prescott, Arizona 86301
(602) 445-3254, Ext. 244

R. Roy Johnson
Prescott College
Prescott, Arizona 86301

Claudia Lane
Health Education Teacher
Alhambra High School
Phoenix, Arizona

She has acted as a curriculum consultant in writing materials with Project Outreach of the Phoenix Union High School System.

William R. Hernbrode
Education Coordinator
Department of Fish and Game
2222 West Greenway Road
Phoenix, Arizona 85023

Keith Yarborough, Chairman
Center for Systems and Sciences
Prescott College
Prescott, Arizona 86301
(602) 445-3254, Ext. 309

Larry Gunter
Director of Environmental Studies
Cochise College
Douglas, Arizona 85607
(602) 364-3451

Jack Richared
Social Science Teacher
Central High School
Phoenix, Arizona

He has acted as a curriculum consultant in writing materials with Project Outreach of the Phoenix Union High School System.

Russel Gum, Associate Professor
Department of Hydrology & Water Resources
University of Arizona
Tucson, Arizona 85721
(602) 844-4661

Mrs. Ellen Corkhill
Phoenix League of Women Voters
(602) 959-0864

Thomas Messner
Biology Teacher
Maryvale High School
Phoenix, Arizona

He has acted as a curriculum consultant in writing materials with Project Outreach of the Phoenix Union High School System.

E. Lendell Cockrum
Professor of Biological Sciences and Curator of Mammals
University of Arizona
Tucson, Arizona 85721

Part of the 1971 teaching staff of the 1971 Tucson Audubon Institute.

Robert R. Humphrey

Currently working under a NSF grant on the ecology of the Cirio. His filed work is being conducted in Baja, California and Sonora, Mexico. He was part of the 1971 teaching staff of the 1971 Tucson Audubon Institute as a plant expert.

Robert D. Ohmart
Professor of Zoology
Arizona State University
Tempe, Arizona

Part of the 1971 teaching staff of the 1971 Tucson Audubon Institute as a bird expert. He has led the Arizona Bird Trips for the Crowder Tours for seven years.

Donald F. Post
Professor, Department of Chemical & Soils
University of Arizona

Part of the 1971 teaching staff of the 1971 Tucson Audubon Institute as an expert in physical factors.

Floyd G. Werner
University of Arizona
Tucson, Arizona 85721

Teaches a beginning course in entomology and classification at the University of Arizona; also is involved with the International Biological Study of desert ecology. He was also part of the 1971 teaching staff of the 1971 Tecson Audubon Institute as expert in invertebrates.

Albert Ellis
Biology Department
Glendale Community College
Glendale, Arizona 85301
(602) 934-2211

He is interested in teacher training in E.E., developing E.E. curriculum materials, and designing a community environmental learning center within Glendale Community College.

Gene C. Reid
Director, City Parks & Recreation
Tucson, Arizona

William Brown
National Parks Service

William Fink
National Parks Service

Harry Willet
Maricopa County Health Department

Richard Henning
Project ECHO

Norma Carey
City of Phoenix

Sabino Lozano
Phoenix Public Library

Steve Carter
City of Phoenix
Mayor's Office

Wayne Nieman
VISTA
Phoenix, Arizona

Doug Ramsey
VISTA
Phoenix, Arizona

Hiawatha Vance
4-H Project
Phoenix, Arizona

Kenneth Walker
Phoenix Elementary School District

James Newman
Phoenix Elementary School District

Roy Doyle
Arizona State University
Tempe, Arizona

Mrs. Julia Perry
6301 North Camino Almonte
Tucson, Arizona 85718
(602) 299-9125

Member of National Advisory Council on E.E. As representative of the public, Mrs. Perry is active in spearheading a project to coordinate citizen groups interested in environmental action. She participates in local programs to educate disadvantaged and bilingual children.

CALIFORNIA

STATE E.E. CONTACT:

Rudolph Schafer, Consultant in Environmental Education
California State Department of Education
721 Capitol Mall
Sacramento, California 95814
(916) 445-8010

Mr. Schafer is also a member of the National Advisory Council on E.E.

STATE PLAN ACTIVITIES:

Under the direction of a full-time consultant and supporting staff, the State Department of Education provides statewide program leadership, conducts teacher training activities, coordinates the educational activities of community agencies, produces and distributes materials, maintains a conservation education library, provides consultant services, and makes program grants to qualified local educational agencies.

The State Superintendent of Public Instruction established a 13-member Citizens' Advisory Committee. Membership of the Committee is selected by the Departmental Staff and is representative of business, industry, conservation groups, and other agencies. Advises State Board and Department of Education regarding operation and maintenance of the environmental education program and promotes community support for it. Meetings are held in Los Angeles, San Francisco, and Sacramento on a quarterly basis.

CURRICULUM OUTLINE:

A study team headed by Dr. Paul Brandwein has developed an environmental education curriculum outline for use in grades 1-12. The publication, entitale Ekistics, A Guide for the Development of an Interdisciplinary Education Curriculum, presents an interdisciplinary approach to environmental studies and centers in the areas of science, social studies and arts and humanities. Individual and social values as they affect the environment and its resources are covered.

REGIONAL COORDINATION:

The California Department of Education receives funds through U.S. Office of Education, Title V Section 505 to conduct a regional environmental education coordination program involving 13 western states. A representative of the Department of Education and of the principal resource management agency of each state serves on the council. Working committees have been set up to work on problems common to all. These include state planning, textbook review, public involvement, and free and inexpensive agency materials. General meetings involving all members are held twice a year, and working subcommittees meet as needed. The council works with ERIC in coordinating informational services on a regional basis.

COUNTY OFFICES OF EDUCATION:

An association of county administrators of environmental education has been established to work with the state Department of Education and to coordinate programs on a statewide basis. Twenty-six (26) resident outdoor schools are operated in California by county offices of education. Further information on county progress is provided on the following pages.

The counties involved in environmental education are listed alphabetically in the charts on this page and the following two pages. An X in the square indicates in which of the 14 types of programs each county is engaged.

	Off-Campus Sites	Transporting Youngsters to Environments	Programs Involving Research Vessels	Co-sponsorship by More Than one County	Co-sponsorship with Other Agencies	Projects Utilizing Federal Funding	On-School Sites	Programs Utilizing College Resources	Teacher In-service Programs	Publishing Curriculum Materials	Offering Consultant Services	Special Education Programs	Planning for Future Programs	Pre-service Education of Teachers
Alameda	x	x	x	x	x	x	x	x	x	x	x	x	x	
Amador	x	x				x	x						x	
Bute						x		x					x	
Calaveras		x							x	x	x		x	
Colusa	x			x	x		x		x				x	
Contra Costa	x	x	x	x	x	x	x	x	x	x	x	x	x	
Del Norte	x				x				x				x	
El Dorado	x			x	x	x	x			x	x			
Fresno	x	x		x	x	x	x	x	x	x	x	x	x	x
Glenn	x				x		x	x	x		x	x	x	x
Humboldt	x	x			x	x	x	x	x	x	x	x	x	x
Inyo	x	x			x	x	x	x	x	x	x	x	x	x
Kern	x	x		x	x	x	x	x	x	x	x	x	x	x
Kings	x	x		x		x			x	x	x	x	x	x
Lake					x				x				x	
Lassen	x	x			x		x		x		x		x	
Los Angeles	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Madera	x	x		x					x				x	
Marin	x	x		x	x		x		x	x	x	x	x	
Mariposa					x	x			x			x	x	
Mendocino					x	x			x	x		x	x	
Merced	x	x	x	x				x	x	x	x	x	x	x
Modoc					x	x	x		x		x		x	x

Solano	Siskiyou	Sierra	Shasta	Santa Cruz	Santa Clara	Santa Barbara	San Mateo	San Luis Obispo	San Joaquin	San Francisco	San Diego	San Bernardino	San Benito	Sacramento	Riverside	Plumas	Placer	Orange	Nevada	Napa	Monterey	Mono	
		×	×	×	×	×	×	×	×	×	×	×	×	×		×	×	×		×	×	×	Off-Campus Sites
×		×		×	×			×	×	×		×	×	×		×	×	×			×		Transporting Youngsters to Environments
				×				×		×		×						×					Programs Involving Research Vessels
		×		×						×			×	×		×	×	×			×		Co-sponsorship by More Than one County
	×	×	×	×						×	×	×	×	×		×		×	×	×	×	×	Co-sponsorship with Other Agencies
×	×			×				×		×				×		×		×		×	×		Projects Utilizing Federal Funding
		×	×	×	×			×	×	×				×			×		×		×	×	On-School Sites
		×		×	×			×		×				×	×		×	×			×		Programs Utilizing College Resources
×	×		×	×			×	×	×	×	×	×	×	×	×	×	×	×	×		×	×	Teacher In-service Programs
					×	×	×	×		×	×		×	×	×		×	×		×	×		Publishing Curriculum Materials
×	×	×	×	×	×			×	×	×	×	×	×	×	×		×	×	×		×	×	Offering Consultant Services
×								×	×	×		×	×	×		×	×	×	×	×	×		Special Education Programs
×		×	×	×	×			×		×	×	×	×	×	×		×	×			×	×	Planning for Future Programs
×			×					×		×		×		×				×			×		Pre-service Education of Teachers

	Off-Campus Sites	Transporting Youngsters to Environments	Programs Involving Research Vessels	Co-sponsorship by More Than one County	Co-sponsorship with Other Agencies	Projects Utilizing Federal Funding	On-School Sites	Programs Utilizing College Resources	Teacher In-service Programs	Publishing Curriculum Materials	Offering Consultant Services	Special Education Programs	Planning for Future Programs	Pre-service Education of Teachers
Sonoma	x				x	x		x	x	x	x		x	x
Stanislaus	x	x		x					x	x	x	x	x	x
Sutter	x	x		x				x	x			x		
Tehama							x		x	x	x		x	x
Trinity	x	x					x	x	x		x		x	
Tulare	x							x	x		x	x	x	x
Tuolumne	x	x		x	x	x	x	x	x		x	x	x	x
Ventura								x	x	x				
Yola	x	x		x	x		x	x	x				x	
Yuba	x	x		x	x			x	x	x	x			

SPECIAL STATE FUNDING PROGRAMS:

Funds to support the Environmental Education Service in the Department of Education and to provide grant funds to qualified school districts are provided by the sale of personalized automobile license plates.

LEGISLATION:

Legislation requires that instruction in wise use of natural resources and environmental protection be given in grades one through twelve and provides for a citizen's advisory committee to the State Board of Education. A joint Policy Statement on Environmental Education has been developed and signed by the Secretary of Resources and the Superintendent of Public Instruction.

FY 72 MONIES GRANTED UNDER THE E.E. ACT TO THE FOLLOWING:

William D. Whiteneck
City Unified Sacramento School District
1619 North Street
Sacramento, California 95814

Development of curriculum materials for the elementary level based on the concept of the city as a waste producing organism.

Richard Altimari
Huntington Beach Union High School District
1902 17th Street
Huntington Beach, California 92648

Manual on the development of schoolyards as outdoor classrooms.

Mrs. Helen A.James
San Juan School District
3738 Walnut Avenue
Carmichael, California 95608

Development of curriculum materials for grades K-12.

Quentin Bryan
Santa Rosa City School
211 Ridgeway Avenue
Santa Rosa, California 95401

Development of a process curriculum for cross-age education.

Richard Johnson
San Luis Obispo County Office of Education
2156 Sierra Way
San Luis Obispo, California 93401

Development of a process curriculum for inservice teaching training.

William Curran
Jefferson Union High School District
Daly City, California

Training pre-service and in-service teachers in an interdisciplinary approach to environmental education.

PUBLIC SCHOOL ACTIVITIES:

Wilderness School
149 9th Street
San Francisco, California 94102
Project Co-Director: Bill Curran

This school represents "a new educational concept stressing environmental studies, ecological systems and group problem solving processes with emphasis on in-field experience."

Shasta County Superintendent of Schools and
the National Park Service

They have coordinated their efforts for a National E.E. Development Camp. (NEED Camp)

Urban Studies Center (Oakland Public Schools)
4917 Mountain Blvd.
Oakland, California
Director: Joe E. Coto

The Center in 1971 conducted a pilot project involving 5th and 6th graders in Urban Dynamics and Drafting Tech. Department students at Laney College, Oakland.

Project SELF
Ocean View School District
7972 Warner Avenue
Huntington Beach, California 92647
(714) 847-2516 or 847-2551

It is a 2 1/4 acre outdoor learning center to be developed on the GoldenView School Campus of the Ocean View School District. A complete curriculum is being developed around SELF to supplement classroom instruction and to teach new material in the environmental sciences. Through the auspices of the Public Employment Program (PEP), the District has hired an Environmental Specialist to oversee the construction of the learning facility and development of associated curriculum. They are relying heavily on contributions for actual construction of the physical site.

Environmental Research Station
Barstow Unified School District
For information contact:
Donald Kelly
Title III
State Department of Education
721 Capitol Mall
Sacramento, California
(916) 445-9361

The object of this Barstow Unified School District project is to motivate the student to use scientific research approaches through the selection of environmental problems. Over 6,800 students in grades 5-12 study each year on the 120 acre desert site. Three-year funding for this program also ended in June 1971, though the Board of Trustees have agreed to continue operation of the Research Station, and expansion of the facilities.

Community Educational Resources of San Diego County
John K. Gessel, Director
Department of Education, San Diego County
San Diego, California 92111

Member of the Consortium of E.E. Councils of the AAAS Commission on Science Education. Project MER (Marine Ecology Research) provides instruction in water monitoring for high school and junior college students who return to their schools and set up field stations. The information gathered from all the stations is fed into a computer and is available to all those involved as well as all public agencies. The project which began training students in February, 1971, just received a one-year grant from National Science Foundation. It serves schools in Contra Costa and Alameda Counties, though any school willing to set up a field station and pay the transportation costs involved may take advantage of the program. For further information contact:

George Castellani
Coordinator of Aquatic Biology
Director of Project MER
Contra Costa County Office of Education
75 Santa Barbara Road
Pleasant Hill, California 94523
(415) 228-3000, Ext. 368

Floating Marine Laboratory: Schools from nine counties make use of the program in Orange County which sends 10,000 students to sea for one day each year and which operates weekend programs for teachers. The Laboratory which began as an ESEA Title III Project, has been in existence for four years. Funding is now through the County Department of Education. An on-site lab serves K-12 students with an emphasis on children in grade 3-6. Also associated with the Laboratory is the Dana Point Environmental Tours Program for both students and teachers. A $3 million marine studies center also at Dana Point is due to be completed by 1978.

Los Angeles City Unified School District
450 North Grand Avenue
Los Angeles, California 90012

FY 1971 Title III monies for E.E. $295,000

"A Model Educational Program in Ecology, K-Adult Education" Director, William J. Johnston.

A comprehensive program in ecology from K-Adult Education was to have been developed, implemented, and monitored. A sequential program in environmental education was to have been developed, and instructional materials for pupil and teacher use prepared; an ecology center complex established; two mobile ecology laboratories developed; and a television series on ecology for elementary and secondary school levels produced.

COLLEGE & UNIVERSITY ACTIVITIES:

F. Bruce Steward: Director
San Bernadino Valley College
701 South Mt. Vernon Avenue
San Bernadino, California 92403

Received FY 72 monies under the E.E. Act to train students to carry out community environmental education activities.

San Jose State College Foundation
San Jose State College
125 South 7th Street
San Jose, California 95114
Dr. John Sperling, Professor, Humanities Program
(408) 277-2953

Funded under the E.E. Act for 1971-72, it established a foundation of community-school programs in environmental education and sponsored a major conference on economic reconversion. The program is carried on as a cooperative activitity between San Jose State College and two Santa Clara County school districts, Alum Rock and Sunnyvale. The Office of Environmental Education grant supported Dr. Sperling's Humanities 160 and 161 students who operated daytime and evening programs for socially and economically disadvantaged students in the two school districts.

La Verne College E.E. Center
La Verne, California 91750

Has a newly established Environmental Center which includes educational facilities it acts as a focalizing agent for many college advisory committees and community organizations.

Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626
Chairman of E.E. and Information Coordinating Committee:
Samuel R. Peterson

This college has been designated an environmental training facility for two years during which time occupationally-oriented environmental programs have been developed and implemented.

Students for Improved America (SIA)
Mr. William Parris, President
Antelope Valley Junior College
Lancaster, California 93434

University of California
Riverside, California

Offers undergraduate and graduate courses. Offers courses in population and community ecology. Has Pollution Research Center where objectives include coordination and strengthening research and graduate training program in the field. There is also an Ecology Center and Resource Library.

IDS 120 (Interdepartmental Studies Class)
University of California
Berkeley, California

This class is involved in: developing a course in "E.E. and Design," developing new E.E. curricula, evolving a "new consciousness of the physical and natural environment and how it can be used as a learning resource." The class started

undergraduate experimental courses in playground design and in E.E. in the Spring and Fall, 1970. It integrated its efforts in Winter and Spring, 1971 and gained permanent course status as an Interdepartmental Studies class under the sponsorship of several schools within the University. (School of Education, College of Environmental Design, School of Forestry and Conservation, College of Agricultural Sciences) In the Bay area, the class works with several specific learning situations. Thousand Oaks Elementary School in Berkeley was the main center for field work during the first year of operation. Now their principal physical resource development engergies are filtering into Project W.E.Y. (Washington Environmental Yard), another Berkeley (K-3) school. Activities are carried on in cooperation with the Ecology Center*(Oxford & Allston Way) and the Golden Gate Audubon Society** (1749 A Grove Street). A book describing activities more fully can be obtained for $5.00 through the Audubon Society. (Golden Gate)

Titles of activities: Interrelationships; games; theatre; planting, growing, and gardening; senses; trips and walks; relatives; water; social and community; eating; crafts.

Other facts: Carol Rollins is responsible for putting this course together. 20-50 students from all disciplines participate each quarter. Professors from many different departments donate their time and energies; the community donates time and materials, etc.

For further information contact:

Office of the Conservation of Natural Resources Experimental Curriculum
College of Agricultural Sciences
Agricultural Experiment Station
University of California
Berkeley, California
Administrative Associate: Loren Cole

* The Center provides space.
** They work with Mary Jeffers at the Audubon Urban Ecology Training Center.

University of California
Santa Barbara, California

In 1970 it began a new interdepartmental major called Environmental Studies.

Science Curriculum Improvement Study
Lawrence Hall of Science
University of California
Berkeley, California 94720

Pacific Southwest Universities Air Pollution Association
Executive Director: Michael Smith
Executive Offices: Riverside
Statewide Air Pollution Research Center
University of California
Riverside, California 92502
(714) 787-5120

Los Angeles:
School of Public Administration
University Southern California
Los Angeles, California 90007
(213) 626-4683

The Association is a 4-university, soon to become 7, consortium organized to cooperate in the area of air pollution education, training and research in the hopes of eliminating wasteful duplication and overlap. The universities now involved are UCLA, University of California at Riverside, University of California at Irvine, and the University of Southern California.

Water Resources Center
Professor Arthur F. Pillsbury, Director
University of California
Los Angeles, California 90024
(213) 825-3421

The Center was organized in order to develop, coordinate, fund, and disseminate information (through publications and conferences) from water-related research conducted in regular teaching departments of the 9-campus University of California. The Center, however, conducts no "in-house" research.

Scripps Institution of Oceanography
Dr. William A. Nirenberg, Director
University of California, San Diego
La Jolla, California 92037
(714) 453-2000

This is a graduate research institution for the study of biological oceanography, physical oceanography, marine biology, marine chemistry, marine geology, geophysics, and applied ocean sciences. Research projects include the topography and composition of the ocean bottom; the properties of water, waves, currents, and tides; and marine biology. The Institution is part of the University of California facilities at San Diego.

Laboratory of Nuclear Medicine & Radiation Biology
Dr. Arthur Wallace, Division Chief
University of California
Los Angeles, California 90024
(213) 477-7531

The Laboratory conducts research and studies in radioecology concerned with short- and long-term effects of radiation on the ecosystem. Its staff is composed of faculty and professionals who work with graduate students in various projects. The research is interdisciplinary in nature.

Institute of Geophysics & Planetary Physics
Dr. Willard F. Libby, Director
University of California
Los Angeles, California 90024

The Institute provides training which may lead to a Doctorate in environmental sciences and engineering in order to create a new field in solving the problems of our environment.

Institute of Ecology
Professor R. S. Loomis, Director
University of California
Davis, California 95616
(916) 752-3026

The Institute was created in order to study the utilization and maintenance of natural resources. The function of the Institute is to facilitate and intensify basic and applied research on ecological problems. Projects encompass studies in behavior, adaptation, speciation mechanics, and predation. Studies of primary productivity and limiting factors as well as the ecology of aquatic and terrestrial communities of plants and animals are in progress. The scientific staff is comprised of members of the faculty and graduate students drawn from various colleges of the Davis campus.

Environmental Sciences Institute
Dr. J. Y. Wang, Director of Research
San Jose State College
125 South Seventh Street
San Jose, California 95114
(408) 292-4628

The Institute was created in order to develop a repository of scientific data to serve the public in decision-making. It serves to coordinate the environmental research of various agencies and individuals by acting as a clearinghouse for information developed by each. The Institute also provides the campus with a research center in which to promote research by private institutions, government, and industry as well as disseminates information to the public by means of advisory groups, conferences, symposia, workshops, and publications.

Forum International
Dr. Nick Hetzer, President
300 Eshleman Hall
University of California
Berkeley, California 94720
(415) 642-1954 or 642-5460

International Ecology University is "the first world-wide center to be concerned with the urgent problems of development of resources, environmental deterioration, and conservation of space and resources." It is a student-sponsored, non-profit organization that provides a basis for coordinated effort in education, research, and action on environmental issues.

Eagle Lake Field Station
Robert I. Ediger, Director
Chico State College
Chico, California 95926
(916) 345-6317

"A very adequate and valuable station is located at Eagle Lake in Lassen County under the Chico State College Foundation." It is available for instruction and research in the biological sciences and other interested departments. Masters Degree research is conducted, forming a large portion of the world-wide objectives of studying organic production of land and water environments. The drainage basin is studied as an ecosystem to gain understanding of the components and interactions which exist in order to use natural resources more wisely.

Center for Urban Affairs
Dr. William W. May, Director
University of Southern California
Los Angeles, California 90007
(213) 746-6102

The Center for Urban Affairs offers studies in urban problems leading to B.A. and Ph.D. degrees and conducts research in developing and assisting in urban problems which are interdisciplinary in nature. The center also works with the community for improvement of the immediate environment.

STUDENTS ORIGINATED STUDIES:

(These students presented reports at the December, 1971 American Association for the Advancement of Science meeting)

Mr. Richard W. Carey
c/o Dr. Robert W. Gill
Department of Life Sciences
University of California
Riverside, California 92502

Development of Environmental Curriculum Resource Materials for Grades 4 through 12

Mr. Mark R. Shelley
c/o Dr. Welton L. Lee
Department of Biology
Stanford University
Stanford, California 94305

Effects of Sewage Discharge on Monterey Bay

Miss Sharron L. Mee
c/o Dr. James B. Gale
Department of Physical Education
Sonoma State College
Rohnert Park, California 94928

Physiological Effects of Exercising in a Polluted Atmosphere

Mr. Charles W. Horton
c/o Dr. J. Richard Phillips
Department of Engineering
Harvey Mudd College
Claremont, California 91711

Mathematical Models and Computer Simulation of Smog Production in the Pomona Valley of California

Mr. Mark Tigan
c/o Dr. Donald W. Aitken
Department of Environmental Studies
San Jose State College
San Jose, California 95114

Relationship of Environmental Quality to Human Health and the "Quality of life"

Mr. John H. Robinson
c/o Mr. S. Ernest Swickard
School of Architecture
California State Polytechnic College
San Luis Obispo, California 93401

Socio-Economic Impact of the Palmdale Intercontinental Airport on a Desert Region of Los Angeles County

Mr. Philip J. Riggan
c/o Dr. Paul H. Zedler
Department of Biology
San Diego State College
San Diego, California 92115

Physical, Biological, and Sociological Effects of Chaparral Fires in Southern California

Mr. Robert Dale Kelso
c/o Dr. Herbert G. Baker
Department of Botany
University of California
Berkeley, California 94720

Grazing Pressure and Successional Changes in the Biotic Communities of the Point Reyes National Seashore

AGENCIES WITH INTEREST IN E.E.:

Volunteer Involvement Program
Department of Parks and Recreation
Sacramento County
717 K Street
Sacramento, California 95814
454-5511

This program was initiated in 1971 to get individuals and groups involved in a first-hand learning experience in the environment. It offers "meaningful participation in ecologically oriented projects principally within the park system of Sacramento County."

Federal Water Quality Administration
Southwest Region
760 Market Street
San Francisco, California 94102

Orange County Planning Department

The Department has available pamphlets and other publications on the deteriorating environmental conditions in Orange County

The Resources Agency
1416 Ninth Street
Sacramento, California 95814

San Francisco Bay Conservation and Development Commission
507 Polk Street
San Francisco, California 94102

Robert Mc Curdy Nature Study Center
1750 North Altadena Drive
Pasadena, California 91107
(213) 794-1866

Los Angeles County Department of Parks and Recreation
Norman Johnson, Director

They have available the "Guide to the Natural History of Eaton Canyon Park"

GROUPS WITH INTEREST IN E.E.:

California Academy of Sciences
Golden Gate Park
San Francisco, California 94118

Object is the exploration and interpretation of natural history. Maintains research collections and operate a museum-aquarium-planetarium complex to which three million visitors come each year.

California Conservation Council
2604 E. Villa Avenue
Pasadena, California 91107

A nonprofit, statewide educational corporation, promoting conservation of natural resources through education and encouraging cooperation in conservation activities.

Planning and Conservation League
909 12th Street
Sacramento, California 95814

A nonprofit, nonpartisan corporation supported by 6,000 individual members and 98 affiliated organizations which, in order to protect and conserve the quality of California's environment and establish methods of planning that will contribute to the wise use of resources, have joined together to seek state-level legislative action.

Save-The-Redwoods League
Room 605
114 Sansome Street
San Francisco, California 94104
President: Ralph Chaney
(415) 362-2352

The League was created in order to rescue representative areas of our primeval forests from destruction. It cooperates with the California State Park Commission, the National Park Services, etc. in establishing Redwood parks and reservations. The League purchases Redwood groves by private subscription and supports reforestation and conservation in our own forest areas. Members cooperate with the California State Highway Commission in assuring preservation of trees and roadside beauty along highways.

Gil Baile
San Francisco Ecology Center
13 Columbus Avenue
San Francisco, California 94111
(415) 391-6307

Member of Ecology Center Communications Council.

Sierra Club
Michael McCloskey, Executive Director
Mills Tower
San Francisco, California 94104
(415) 981-8634

The Sierra Club is a membership organization which was created in order "to help people explore, enjoy, and protect parks, wilderness, waters, forests, and wildlife. It also strives to rescue places that make America beautiful. The Sierra Club disseminates information to the public concerning vital issues in environmental preservation and improvement." Membership is open to those who are interested in exploring, enjoying, and protecting natural areas in the U.S.

Society for Humane Abortion, Inc.
Patricia T. Maginnis, President
P.O. Box 1862
San Francisco, California 94101
(415) 387-6480

The Society seeks to promote more humane abortion through education of the public. This includes publishing and distributing newsletters, reprints of outstanding articles, and offering two excellent films on abortions for the use of any interested groups.

Scientific Analysis Corporation
Dr. Dorothy Miller, Director of Research
4339 California Street
San Francisco, California 94118
(415) 752-7180

SAC is a private, non-profit organization which is dedicated to the improvement of the human condition. It conducts social surveys, provides consultation and training in health and welfare, and offers demonstration projects and community action programs. SAC is a core group of researchers, technicians, and administrators who develop and coordinate research projects involved in many diverse areas relevant to today's social problems.

People for Open Space
Irwin Luckman, President
126 Post Street
San Francisco, California 94108
(415) 781-8729

Founded in order to establish in the Bay Area a new regional governmental state agency with the power and funds to create an open space system to curb urban sprawl, preserve forests and watershed lands, replenish polluted air, and provide recreation areas close to the cities. POS supports a regional approach to environmental protection in the San Francisco Bay Area. Its membership comes from the 9 counties which touch on the Bay and which make up the region. In response to many requests for help on local conservation "brush fires", the organization formed a Land Use Institute to aid individuals and organizations determined to prevent unwise use of the land. The Institute is composed of professionals and university faculty members whose skills and interests are related to land use. It has set up a procedure for receiving requests for advice, reviewing of environmental problems involving land use and the process of replying to the requests received.

Environmental Workshop
Andy Butler, Co-Chief
123 Greenwich Street
San Francisco, California 94111
(415) 981-8518 or 986-6110

"The primary function of the Workshop is educational in that knowledge of the precarious balance between man and his environment will impell responsible participation of the informed individual in the future of his environment. It endeavors to present environmental problems with the alternate possibilities for solution, and to identify the means of implementing the solutions. Members feel that environmental education extends into the realm of politics."

Jerry Kindred, Project Director
Shelter Institute
149 Ninth Street
San Francisco, California 94103

The Institute was awarded FY 72 monies under the E.E. Act for development of a process curriculum for secondary level.

Ecology Center Press
1360 Howard Street
San Francisco, California 94103

The Ecology Center has a reprint series of articles at nominal price.

Ecology Action of San Fernando Valley
9520 Etawanda
Northridge, California 91324
Contact: Bruce Rector

Southern California Environmental Coalition
P.O. Box 77976
Los Angeles, California 90007

San Leandro Ecology Center
1190 Davis
San Leandro, California 94577
Contact: Carol Tickner

Environmental Information Clearinghouse, Inc.
2179 Allston Way
Berkeley, California 94704
Project Director: Patrick Heffernan

The Clearinghouse was awarded FY 72 monies under the E.E. Act for the establishment of an information house that will serve as an interface between business and environmental organizations.

California Institute of Man in Nature
Box 392
Berkeley, California 94701

Science Students for Social Responsibility
Joel Schwartz, Head
3018 Fulton Street
Berkeley, California 94701
(415) 548-2888

The SSSR was organized in order "to encourage science students to redirect sciences to serve the people of the world in a moral and responsible manner. Students of science in any capacity and from any institution are welcome to join our efforts."

Northern California Committee for Environmental Information
P.O. Box 761
Berkeley, California 94701

One of the Scientists Institute for Public Information affiliated science information committees.

Berkeley Ecology Action
3029 Benvenue
Berkeley, California 94705

Available from them: "How to Start a Community Recycling Program".

Ecology Action
Cliff Humphries, Co-Founder
P.O. Box 9334
Berkeley, California 94709

The major thrust of Ecology Action has been to focus upon the survival crisis in addition to formulating and publicizing alternatives to ecologically destructive practices. It formed a non-profit corporation in 1969, the Ecology Action Educational Institute, which has become their center for creation and distribution of information and programs. Activities include supplying speakers and literature, organizing and teaching classes and workshops, and staging public participation events and ecology fairs.

Interaction Associates
2637 Rose Street
Berkeley, California 94708
(415) 849-3622

It consults with clients in the design, implementation, and evaluation of curricula in process awareness and problem-solving: "Tools for Change" Approach. It received a grant from the Carnegie Corporation of New York in January, 1970 which was extended through 1972 to develop and test in pilot form courses in problem-solving at the 6th grade, 9th grade, and graduate school level. These courses were to plan the process by which they are going to attack large scale environmental problems. It is building an extended network of process (and content) consultants throughout the country, plus a variety of other activities. Materials under development: Problem-Solving Notebook; Tools for Change: A Basic Course in Problem-Solving; Tools for Change (30 minute 35mm color film), Directory of Heuristic Strategies; Directory of Experiences.

Save San Francisco Bay Association
Dr. William Siri, President
P.O. Box 925
Berkeley, California 94701
(415) 849-3053

The Association is primarily educationally-oriented in order to inform the community on threats to the San Francisco Bay. Members are kept informed through newsletters. Its major goals are to protect open waters, to promote regional planning, to plan for conservation of wildlife, to create boating and recreational facilities, and to beautify the shoreline. The Board of Directors has considerable knowledge of regional resources because of regional conferences in 1969 and 1971. Many of the Directors are leaders in other citizen or conservation organizations.

Audubon Urban Ecology Training Center
Berkeley, California
Contact: Mary Jeffers who has worked with the IDS 120 course at University of California, Berkeley.

It provides leadership training in urban ecology for elementary school teachers, youth group leaders, parents, school resource volunteers, and volunteer or professional pre-school teachers.

Stop Littering Our Beaches and Bays Committee (SLOBB)
Room 1101
P.O. Box 524
San Diego, California 92112

In operation for 3 years it is dedicated to the principle of promoting a clean beach and bay environment through public education.

San Diego Ecology Centre
P.O. Box 16177
San Diego, California 92116
583-5369

A non-profit organization dedicated to fostering education and community involvement in local environmental problems. It is affiliated with the Ecology Center Communications Council, Washington, D.C. In existence for a short time it has: initiated the first successful glass recycling program in San Diego, compiled a comprehensive listing of environmental organizations in San Diego, has a regular column in a local newspaper, the Door, works cooperatively with the Environmental Crisis Bulletin, San Diego's environmental newspaper, operates an environmental switchboard to inform citizens of vital environmental issues, participated in a recycling seminar for teachers. Activities to be developed: researching complete recycling in San Diego County, opening an environmental information center with all essential educational resources, publishing an environmental action and information manual, including resources, group listings, educational materials, individual action, etc. This is a volunteer organization, a tool for community organizing rather than a membership group. The Center has available a list of environmental organizations in San Diego.

IREM Project, Room 215
County of San Diego
1600 Pacific Highway
San Diego, California 92101
Education and Communication: Gemma Parks

Mrs. Parks has information about all kinds of recycling opportunities in San Diego County.

Environmental Education Clearinghouse
Suite 17, House of Hospitality, Balboa Park
P.O. Box 2422
San Diego, California 92112
(714) 234-3940 or 278-8144
Director: Gerald Fox

"A family-operated consulting service on E.E., specializing in bibliographic and directory services." They have films for rent or sale, and books and pamphlets for sale.

California Institute of Man in Nature
John Olmsted, President
Box 392
Berkeley, California 94701
(415) 524-9425

The Institute endeavors to make available to members and concerned persons direct environmental education experiences throughout California; to bring together

teachers, conservationists, institute members, and the public for spring and fall lectures designed to supplement existing levels of environmental education and awareness; and to produce and make available environmental education materials (especially audio-visual) to the educational community and the public.

Ecology Center
Raymond R. Balter, Director
2179 Allston Way
Berkeley, California 94704
(415) 548-2220

The Center's primary concern is to encourage citizen awareness and involvement in broad environmental issues. The Center collects and distributes information on individual issues and attempts to augment the activities of groups and individuals dedicated to their resolution. The Center is a member of the Ecology Center Communications Council.

Palmdale Homeowners Association
Mr. John Tanner, Sr. President
P.O. Box 60
Palmdale, California 93550

Ecology First Foundation
Box 711
Pacific Grove, California 93950

New Morning Ecology Center
Fairway Shopping Center
Pacific Grove, California

Build The Earth
Judie Rodda, Coordinator
P.O. Box 11393
Palo Alto, California 94306

Build the Earth is a nonpolitical and nonprofit organization which was created "to provide a relevant education so that women from all nations might be unified to work -- woman to woman -- for a world without war, starvation, and overpopulation -- a world in which all children have an opportunity to fulfill their destinies as human beings. It is very concerned with the attitude of a person and how one may grow in his ability to perceive the existing realities, knowing that if the individual is in the right relationship with the environment, the result will be a right action."

Committee for Green Foothills
Pat Barrentine, Executive Secretary
P.O. Box 1511
Palo Alto, California 94306
(415) 369-7422

The Committee seeks to preserve, protect and enhance the environmental quality of San Mateo and Santa Clara Counties through local, county, state and national programs to support balanced land use, regional planning, political responsibility, public education, creek protection, and grading controls. CFGF is an action group. It is not tax-exempt so that it may support candidates and fight openly for causes when necessary.

California Conservation Council
Mrs. J. B. Atkisson, Executive Secretary
P.O. Box 5572
Pasadena, California 91107
(213) 792-2321

The Council endeavors to promote conservation education of the public as well as to encourage cooperation and participation in conservation activities. It publishes a Conservation Commentary quarterly as a source of information to the general public.

Ecology Center
3160 E. Del Mar
Pasadena, California
Chairman: Mrs. William Krueger

The Center has a 3 acre, in-city setting. Nearly a dozen agencies have helped establish the center: the Crippled Children's Society, Villa Esperanza, Boys' and Girls Clubs of Pasadena, Girl and Boy Scouts, and YMCA, the Pasadena City College recreational education department.

In addition, the U.S. Forestry Department surveyed the land. Cal Poly at Pomona students planned the landscaping and staked out the site. The Los Angeles County Arboretum advised on plant selection, probably survival, neights and species. But it was the Junior League of Pasadena which put up the $7,000 for costs. And the league is vitally interested in forming a group to carry on the project according to Mrs. Baird Marble Jr., league liaison.

Coalition for Clean Air
1670 Beverly Blvd.
Los Angeles, California 90026
Chairman: David Hirsch

Founded in fall of 1970 by representatives of the clean air groups who wanted a non-partisan service organization to put existing resources to better use. It also includes most of the general conservation groups and a sprinkling of business and labor groups, homeowner's associations, and research organizations.

People Pledged to Clean Air
Mrs. Robert Attiyeh, Chairman
210 S. Canyon View Drive
Los Angeles, California 90049
(213) 393-4888

The organization seeks to achieve the elimination of atmospheric pollution which is produced by the internal combustion engine.

Open Space Inc.
15137 Mulholland Drive
Los Angeles, California 90024
Contact: Edward M. Gans

Brave New World, The Store of
Environmental Expressions
7460 Melrose Avenue
Los Angeles, California 90046
655-3833

This is a functioning ecology center conceived and established in January, 1972 by graphics designer, Julie Finger. Present goals are to develop and catalog materials for E.E.; to make this a source for teaching materials at all levels in the environmental field. They have exhibits on reuse of materials and plan to create many more. To that end the center is open to visiting schools. For the summer they plan to organize classes for children in crafts, using recyclable materials. These will be continued in the fall with the addition of programs for adult and senior citizens. The center also stocks books and craft supplies.

Green Power Foundation
10519 South Western Avenue
Los Angeles, California 90047
President: Norman A. Hodges

The Foundation sponsors Community Action Programs. "An inner city environmental information center."

Sierra Club
Los Angeles Chapter
Environmental Education Committee

CAN (Clean Air Now)
P.O. Box 5811
San Bernadino, California 92408

Operation Oxygen, Inc.
Jack Novack, Director
P.O. Box 5975
Pasadena, California 91107

This organization seeks immediate relief of air pollution in the Los Angeles Basin. Its program is an educational process carried on through meetings, correspondence and distribution of printed materials. It does not have political affiliations and does not attempt to change law or legislation. It helps and supports Federal, State and local agencies in their efforts to clean up the environment. Its aim is to reduce the number of cars on the road.

John Muir Institute for Environmental Studies
San Francisco, California
Chairman: Donald Aitken (also: Chairman, Dept. of Environmental Studies, San Jose State College)

The Institute utilizes membership revenue and grants and gifts to seed environmental research and educational projects which need to be carried out. It publishes a series of books of international scope -- The Earth's Wild Places -- in cooperation with other publishing organizations. It is also the purpose of JMI to help to organize and interpret conservation information and to see that it is used effectively in helping to solve environmental problems.

Ecology Information Center
1221 20th Street
Sacramento, California 95821
(916) 444-3174

Member of Ecology Center Communications Council

Marin Ecology Center
Box 725
San Anselmo, California 94960
(415) 383-4226

Member of Ecology Center Communications Council

California Committee to Legalize Abortion
Sally Yoakum, Secretary
P.O. Box 734
Sunnyvale, California 94088
(408) 241-7990

The Committee is composed of citizens interested in placing an initiative on the California ballot to make abortion a privately controlled individual right.

Sonoma County Environmental Center
211 Santa Rosa Avenue
Santa Rosa, California 95404
(707) 545-2196

The Center was established in 1970 to serve as a resource and information center for the general public and to provide office facilities for the use of conservation organizations. One of their activities is a recycling program. A member of Ecology Center Communications Council, Washington.

Citizens Against Air Pollution
Peter B. Venuto, President
110 Roundtable Drive 14-1
San Jose, California 95111
(408) 227-8153

CAAP is a citizens' action organization with a "constructive and forceful program for clearing up the air in the San Francisco Bay Area. It is comprised of concerned citizens who seek to protect Bay Area residents against serious threats of health damage, chronic respiratory illness, or shortened life caused by breathing contaminated air." The organization endeavors to disclose all facts about identities of contaminants, their amounts, sources, and effects, so that proper pressure can be applied to polluters.

San Leandro Ecology Center
1190 Davis
San Leandro, California 94577

Member of Ecology Center Communications Council

Human Factors Society
Marion G. Knowles, Executive Assistant
P.O. Box 1369
Santa Monica, California 90406

The Society is an interdisciplinary professional organization serving human factors specialists and their associates by increasing knowledge about man in relation to machines and working environments, by promoting the application of human factors knowledge to the design of systems and devices of all kinds, and by providing for the exchange of ideas among specialists engaged in developing and applying such information.

The Santa Barbara Child's Estate Zoological Gardens E.E. Program
Child's Estate Foundation
P.O. Box 4758
Santa Barbara, California 93103

Has been established "to initiate in this area instruction and indoctrination to create in child, parent and community an awareness and concern of and response to the threatening ecological imbalance of our environment. It has established in a nature classroom facility on 81 acres of preserved public property that includes a wild bird refuge and botanical and zoological gardens a formal program of environmental instruction with auxilliary field tour and study under instruction.

Aquatic Research Institute
Dr. R. R. Rofen, Director
Port of Stockton
P.O. Box 648
Stockton, California 95201
(209) 466-5324

The Institute offers a continuing educational program involving oceanography, marine and freshwater biology, and related subjects for college and high-ability high school students. It includes formal classes, field training and research projects. The Institute maintains a library which is open to students and interested citizens and researchers.

Community Environmental Council Inc.
15 West Anapamu Street
Santa Barbara, California 93104
Director: Philip Marking
(805) 962-2210
President: J. Marc McGinnes
(805) 963-7739

CEC is a non-profit educational organization. Its objective is to provide the Santa Barbara region with a comprehensive educational program designed to clarify local environmental problems and to aid the community in seeking solutions to these problems. CEC's main project, the Community Ecology Center was created to foster this objective. In the year and a half of its operation it has created a number of educational programs that have elicited both strong support and broad-based participation by Santa Barbara citizens. With the assistance of grants from HEW's Office of E.E., Maytag, Sheinbaum, Sunshine, and Santa Barbara Foundations, donations from the Santa Barbara Museum of Art, unions, contractors, and interested citizens of material, labor, and money, the Center is nearing its goal of offering the Santa Barbara South Coast region a complete environmental education program. It operates on a year round basis: environmental bookstore, technical

and general environmental lending library, environmental switchboard, community organi : garden, El Mirasol Polyculture E.E. Center, CEC's periodical The Survival Times, published monthly, work areas and storage facilities for local conservation and consumer-oriented organizations, calendar of all regional environmental events, audio-visual equipment and services for public forums on environmental issues, headquarters and work area for Adult Education's environmental planning course, public speaker's bureau. This group was funded with FY 72 monies under the E.E. Act.

Santa Barbara Underseas Foundation Inc.
P.O. Box 4815
Santa Barbara, California 93103

Get Oil Out, Incorporated
Mrs. George M. Sidenberg, Jr., President
111 East De La Guerra Street
Santa Barbara, California 93101
(805) 965-1519

GOO is a citizens' action group which is dedicated to getting all oil operations out of the Santa Barbara Channel. The organization was formed in response to the Santa Barbara oil disaster of February, 1969. It was instrumental in making the public aware of the dangers in unrestricted oil drilling.

Northeast Environmental Center
640 10th Street
Arcata, California 95521

Member of the Ecology Center Communication Council, Washington, D.C.

The Trailfinders
Harry C. James, President
Lolomi Lodge
P.O. Box 716
Banning, California 92220
(714) 565-77 (Unit 6832)

The organization is dedicated to educating by all appropriate means in the arts and sciences pertaining to the outdoors, including the advancement of education in the preservation of natural resources, wildlife, and places of recreational, scenic, historic, and scientific value.

Audubon Center of Southern California
El Monte, California

Teacher-naturalists here have helped in preparation of teaching materials.

Environmental Action Group
6731 Lurline Avenue
Canoga Park, California
Director: Alan Arthur Tratner

Founded in 1969 EAG produces educational projects along with supplying printed matter. The group was invited to participate June 16-19 in the Yosemite Institute pilot environmental education program in the Yosemite National Park. "The Ultimate Crisis," a film developed by Alan Arthur was chosen as the feature of the pilot program. (This first and subsequent programs to educate the public are sponsored by the Yosemite Institute with Don Rees, director and by Citizens for a Better Environment of Los Angeles, New York and Chicago as well as the Canoga Park based action group.)

Council for Planning and Conservation
Ellen Stern Harris, Executive Secretary
522 N. Foothill Road
Beverly Hills, California 90210
(213) 276-2685

The Council serves as a clearinghouse for information concerning the environment and provides such data to other groups in order to communicate solutions of threats to vital elements of the Southern California environment.

South County Ecology Center
3667 Castro Valley Boulevard
Castro Valley, California 94578
(415) 582-7664

Member of Ecology Center Communications Council, Washington, D.C.

SRF Research Institute
Sidney R. Frank, President
1500 Cecil Cook Place
Goleta, California 94017
(805) 964-4477

The SRF Research Institute has a staff of professionals who engage in general geophysical research with emphasis upon problems of environmental pollution.

Solano Ecology Center
P.O. Box 991
Fairfield, California 94533

Member of Ecology Center Communications Council, Washington, D.C.

Fresno Community Council
208 Crocker-Citizens Bank Building
Fresno, California 93721
237-8359

Has available a list compiled by the Fresno County Clean Air Council of community organizations concerned about the environment.

Stamp Out Smog
Mrs. Gordon M. Koch, Executive Secretary
3334 Bonnie Hill Drive
Hollywood, California 90028
(213) 467-3460

SOS features a coordinated program of air pollution research between private and governmental agencies and seeks the establishment of a regional air pollution control district as well as the creation of a competent basin-wide rapid transit system. It urges the enforcement of a standard of maximum exhaust emissions which are set by the state health officer with sanctions for violations. Members encourage the recomposition of gasoline in order to limit noxious gases to a minimum, and seek an extensive automobile inspection system under the Department of Motor Vehicles. The organization also strives to obtain effective enforcement of smog control legislation governing industry and the public in order to eliminate atmospheric pollutants.

American Association of University Women
Huntington Beach, California

It has published a booklet concerning the condition of the city's environment and what an individual can do about it; it has also organized a team of community resource teachers who travel from school to school giving special programs.

Valley Ecology Center
P.O. Box 971
Livermore, California 94550
Chairman: Mary Ellen Ludemann
(415) 443-1629

Member of the Ecology Center Communications Council, Washington, D.C.

Clean Air Coordinating Committee
Donald E. Watson, M.D., Chairman
987 Via Seville
Livermore, California 94550
(415) 443-1186

The Committee is composed of concerned citizens who have united in order to coordinate the activities of local individuals and organizations for clean air.

"It seeks to stimulate public interest and education by use of local press and radio and it provides public lectures on air pollution. The Committee also provides expert technical advice with the aim of promulgating effective legislation."

PLUS (Preserve Lompoc's Unique Surroundings)
Ms. Beverly Smith, Chairman
468 St. Andrews
Lompoc, California 93436

Zero Population Growth
Shirley Radl, Executive Director
367 State Street
Los Altos, California 94022
(415) 941-3666

Zero Population Growth is an educational action organization which is composed of concerned citizens whose purpose is to bring about a population stability in the United States. The group sponsors scientific, educational, and political programs in order to inform the community on birth control and population limitation.

Eco-Info, Inc.
834 Carquinez Way
Martinez, California 94543

Member of Ecology Center Communications Council, Washington, D.C.

Peninsula Conservation Center
885 Oak Grove
Menlo Park, California 94025
(415) 322-6671

Member of Ecology Center Communications Council, Washington, D.C.

Portola Institute, Inc.
1115 Merrill Street
Menlo Park, California 94025

Monterey Bay Committee for Environmental Information
Monterey Peninsula College
880 Fremont
Monterey, California 93940

The Committee is one of the Scientists Institute for Public Information affiliated science information committees.

Ecology Action of San Fernando Valley
9520 Etawanda
Northridge, California 91324

Member of Ecology Center Communications Council, Washington, D.C.

Conservation Coordinators
Janet Adams, Co-ordinator
P.O. Box 548
Menlo Park, California 94025
(415) 322-6671

Conservation Coordinators is a non-profit business formed to give professional direction to conservation legislation. It is allied with 23 organizations and is involved in local issues such as saving San Francisco Bay, water pollution, logging controls, coastal controls, recycling wastes, wildlife refuge in the South Bay, open space, etc.

Ecology Action Institute
Box 3895
Modesto, California 95352
Project Director: Daniel Pollack
(209) 529-3784

The Institute was funded with FY 72 monies under the E.E. Act for development of a process curriculum for the community. The Institute is a member of the Ecology Center Communications Council, Washington, D.C.

Orange County Environmental Education Advisory Council
Chairman: Dr. Nathanial Lamm

A coalition of 25 organizations and industrial interests.

Marine Ecological Institute
811 Harbor Blvd.
Redwood City, California 94063
(415) 364-2760

Formed "to help provide a new knowledge to change old attitudes about water quality control and pollution control by conducting or sponsoring educational programs, water quality data collection, and research."

Bio-Dynamic Farming and Gardening Association, Inc.
17240 Los Alamos
Granada Hills, California 91344
Chairman: Robert Sobolewski
(213) 368-1683 or 363-1893

Jurupa Mountains Cultural Center
7621 Highway 60
Riverside, California 92509
Executive Director: Ruth Kirkby
(714) 685-5818

It is the only environmental education center in the inland southern California area, established 7 years ago.

Clean Air Now (CAN)
Program Director: William Wybourn
7411 Westwood Drive
Riverside, California 92504

One of two citizen groups in southern California that put together a citizens workshop in December, 1971 on the University of California campus at Riverside. It is known as one of the most active and effective air pollution organizations in the area. It has provided other workshops on Ecology with literature, slide shows, etc. free of charge.

Sacramento Science Center and Junior Museum
Ray Underhill, Director
4500 Y Street
Sacramento, California 95817

Western Regional Office
National Audubon Society
Paul Howard
555 Audubon Place
Sacramento, California 95821

Stanford Committee for Environmental Information
Stanford University Medical Center
Stanford, California 94305

One of the Scientists Institute for Public Information affiliated science information committees.

California Institute for Man and Nature
Max Milton
Palo Alto, California
(415) 362-7762

The Yosemite Institute
Yosemite, California 95389
Executive Director: Donald Rees
(209) 372-4331

A non-profit corporation located in Yosemite National Park - "a new concept for utilizing the natural and human resources and for developing the educational potential of man within the boundaries of a national park. It is a timely concept with the recognition of the need for environmental literacy, for discovering ways to achieve it, and for developing responsibility." Yosemite, 1200 square miles of Sierra mountains, with the addition of The Yosemite Institute, is today a classroom for environmental education. By June, 1972 700 California school students and teachers participated in Institute week-long environmental awareness programs and another 500 of all ages in a 9-day John Muir observance.

Husicon
2635 Mira Vista Drive
El Cerrito, California 94530
(415) 235-6347

Northern California Committee for Environmental Information
1050 San Pablo Avenue
Albany, California
(415) 642-7191
Dale Sanders, Education Chairman

The Northern California Committee for Environmental Information has a lending library of more than 500 slides on air pollution, water pollution, land usage and other environmental topics as part of its environmental education activities. They hope to organize the slides into units accompanied by explanatory material. A unit has been experimenting with the San Francisco Bay Area which shows the social, cultural, biological and physical aspects of the area, attempting to get students to ask questions about the environment they live in.

Northern California Marine Sciences Coordinating Committee
Robert A. Brandeberry, Director
San Francisco Bay Areas Schools Marine Sciences Floating Laboratory
1474 Ascension Drive
San Mateo, California 94402
(415) 341-1957

The Committee endeavors to promote interest in the San Francisco Bay as a living portion of our environment. It aids teachers in developing the Marine Sciences Resources Units to be used within the regular science classes as well as implements procedures that will provide a Floating Laboratory from which high school students may sample an estuarine environment.

Natural Science Education Resources (NSER)

An association of consulting biologists involved in a variety of educational programs for adults, teachers, and school children, environmental impact studies, and curriculum designing projects. It contracts with the National Audubon Society to conduct all the educational programs at the Richardson Bay Wildlife Sanctuary and Education Center. These programs include field trips for school groups, training sessions for teachers, and workshops in nature education and conservation. NSER was awared a NSF grant (1970-71) for a field course in biology, ecology, and conservation for elementary school teachers from 7 schools in the mill Valley School District, Mill Valley, California.

Open Space, Inc.
423 28th Avenue
Venice, California 90291
Project Director: Edward Gans

Open Space was awarded FY 72 monies under the E.E. Act for the development of process curriculum for the elementary level utilizing the urban environment as an educational resource.

RESOURCE MATERIALS AVAILABLE:

Marine Biology: Developed jointly by The Placer County Office of Education, Kenneth Lonergan, County Superintendent, and Sierra College.

"Designed to be used with children in the intermediate elementary grades. It has been constructed so that the teacher, with a very limited background in marine biology, can provide some real and meaningful experiences for her class."

Communities -- Student Manual
Communities -- Teacher's Guide
Environments -- Teacher's Guide
Populations -- Teacher's Guide

Science Curriculum Improvement Study
Lawrence Hall of Science
University of California
Berkeley, California 94720

A booklet, "How to Start a Community Recycling Program" is available from:
Berkely Ecology Action
3029 Benvenue
Berkely, California 94705

What's Ecology? by Cliff Humphrey and Robert G. Evans

"Offers an excellent overview for classroom discussion." $1.50, paperback available from: Ecology Action Educational Institute, Box 3895, Modesto, California 95352.

Conservation of Our Environment: Office of Harry E. Blair, Kern County Superintendent of Schools, Kern County Civic Center, 1415 Truxtun Avenue, Bakersfield, California, July 1969, 17 pp.

Contents: Program of community awakening, program of widening horizons, Kern County Program of Outdoor Education, knowledge and materials pool, training for science and conservation instruction, skills training for young adults, arboretum, children's farm, improvement of science instruction, science-conservation teacher training program, vest pocket park, underground 200, mobile E.E. project.

Ekistics - A Guide for Conservation and Environmental Studies Curriculum Developmennt.

Handbook of California's Natural Resources (Vol 1 & 2).

Guide to Environmental Education Films, Filmstrips and Picture Sets.

Guide to Free and Inexpensive Environmental Education Materials.

Report of Citizens Advisory Committee on Conservation Education.

PLACES TO CONTACT FOR RESOURCE MATERIALS:

San Diego Ecology Centre
P.O. Box 16177
San Diego, California 92116

Available from the Centre:

1. Comprehensive list of environmental organizations in San Diego.
2. An environmental action and information manual including resources, group lisings, educational materials, individual action, etc.

Wadsworth Publishing Company
Alexander Kugushev, Editor
10 Davis Drive
Belmont, California 94002
(415) 592-1300

The company publishes college-level instructional materials, instructional materials in all aspects of environmental studies, including physical, biological, and socio-economical facets of the human environment.

Environmental Education Clearinghouse
Suite 17, House of Hospitality, Balboa Park
P.O. Box 2422
San Diego, California 92112
(714) 234-3940 or 278-8144
Director: Gerald Fox

They have films for sale or rent and books and pamphlets for sale.

NEWSLETTERS:

"Pollution Parlance"
San Diego Clean Air Council
8761 Cliffridge Drive
La Jolla, California 92037

POSSIBLE RESOURCE PERSONS:

James N. Anderson
Chairman, Group Major in Environmental Studies
Department of Anthropology
University of California
Berkeley, California 94720

* Rosemary Barker & Mary Watkins - S.S. Division
Skyline College
3300 College Drive
San Bruno, California 94066

* Diane Beere
701 Carolina Street
Napa, California 94558

* These persons are familiar with and/or have used the Group for E.E. curriculum materials from Philadelphia, Pa.

Alan R. Bishop
Claremont Men's College
Claremont, California 91711

Member of 1971 International Youth Conference on the Human Environment.

* Marie Boss
Harvest Park School
625 Main Street
Pleasanton,California 94566

* Derela W. Brandt
Warner Avenue School
615 Holmby Avenue
Los Angeles, California 90024

Robin Brooks
Instructor
San Jose State College
San Jose, California

Also: Member of Sierra Club E.E. Committee

Martin Brittan
Department of Biological Sciences
Sacramento State College
6000 J Street
Sacramento, California 95819

Louise Brown
Teacher, Grade One Science
Berkeley, California

Richard Bryans, Director
Stanislaus County Outdoor Education Program

Paul Brandwein
President, Center for the Study of Instruction
Harcourt, Brance and World
Polk and Geary Streets
San Francisco, California 94109
(415) 771-2042

He prepared an E.E. guide for the California State Department of Education, Ekistics, A Handbook for Curriculu Development for Conservation and Environmental Education. (K-12)

* These persons are familiar with and/or have used the Group for E.E. curriculum materials from Philadelphia, Pa.

Loren Cole
Administrative Associate
Conservation of Natural Resources Program
University of California
Berkeley, California 94720

(Participates in IDS 120 course)

* Nivian Chertok
1309 Armacost Avenue
Los Angeles, California 90025

Thomas Crocker
Economics Department
4122 Sproul
University of California
Riverside, California 92502

Bruce M. Crawford
Assistant Superintendent
Office of County Superintendent of Schools
Civic Center
Bakersfield, California
327-2111 - Ext. 2651

* Robert Cadwallader
Kent Junior High
250 Stadium Way, Room 32
Kentfield, California 94904

Rudd A. Crawford
Principal
Pacific Grove Junior High
Pacific Grove, California

Richard Cooley
Chairman, Environmental Studies
University of California
Santa Cruz,California

Fields Cobb
Professor of Plant Pathology
University of California
Berkeley, California 94720

(Participates in IDS 120 course)

* These persons are familiar with and/or have used the Group for E.E. curriculum materials from Philadelphia, Pa.

Dr. Arthur Costa
Department of Education
Sacramento State College
6000 J Street
Sacramento, California 95819

George Collins
Consultant
Conservation Associates
San Francisco, California

* Toni Danchik
1701 Purdue Avenue, #7
West Los Angeles, California 90025

Donald L. Dahlsten
Associate Professor of Entomology
University of California
Berkeley, California

He helped prepare the Scientists Institute for Public Information workbook on pesticides.

Glen Davis
Teacher
Sly Park Outdoor School
Sacramento, California

Jack Davidson
Chairman
California Environmental Education Advisory Committee
Superintendent, Los Angeles County Schools
155 West Washington Blvd.
Los Angeles, California 91105
(213) 749-6911

Tony De Bellis
High School Teacher
Morago, California

William C. Dillinger
Chief, Information and Interpretation Division
Department of Parks and Recreation
1416 Ninth Street
Sacramento, California 95814

Regional Representative to the July 1971 Western Regional Conference.

* These persons are familiar with and/or have used the Group for E.E. curriculum materials from Philadelphia, Pa.

Professor Paul Ehrlich
Stanford University
Palo Alto, California 94305

Mrs. Doris Emery
State Conservation Education Chairman, PTA
145 Lake View Avenue
Spring Valley, California 92077
(714) 479-5394

Garrett Eckbo
Professor, Lancscape Architecture
University of California
Berkeley, California

George Floraton
Teacher, Junior High School
Torrence, California

Susan Frommer
University Heights Junior High School
Riverside,California

Writer of Environmental Studies Curriculum.

Lewis Follansbee
Orange Coast College
California

Attended April, 1971 meeting of the National Association for Environmental Education. He is familiar with the Miami-Dade Junior College, Florida,Man and Environment materials.

Paul Gersper
University of California
Berkeley, California

J. W. Garlinghouse
United States Department of Agriculture
Soil Conservation Service
2020 Milvia Street
Berkeley, California 94704
(415) 841-5121

R. W. Gill
Assistant Professor, Biology
University of California
Riverside,California

Interests: Population and community ecology, models in population biology, interaction of population ecology and population genetics.

John Gofman & Arthur Tamplin

Two scientists who are doing everything they can to develop an Adversary System of Scientific Inquiry. They are living examples of the adversary idea. Both men, while working for the AEC at Lawrence Radiation Laboratory came up with research showing that nuclear power plants are possibly the worst environmental hazard ever created by technology. They are being asked to speak by citizens groups around the country where nuclear plants are proposed. To give greater emphasis to the development of objective criticism, the men have suggested a network of Scientific Adversary Centers. These Centers can serve as a springboard for the asking of the right questions. Only after the "right questions" are asked can we ever hope to get the right environmental answers. For more information on adversary concepts write for a free copy of the special issue of the subject from: Environmental Action Bulletin, Rodale Press Inc., Emmaus, Pa. 18049.

Lee Guidotti
Southern California Environmental Confederation and
Student Environmental Confederation of California
11486 Burbank Blvd.
North Hollywood, California 91601

James Gladson
Eagle Rock High School
Los Angeles, California

Writer of Environmental Studies Curriculum.

Kent Gill
Teacher, Junior High School
Davis, California

William Hammerman
School of Education
San Francisco State University
San Francisco, California

He is a member of the NEA Task Force on E.E., and director of E.E. Center at Camp Leonard run by San Francisco State.

Julie Hamman
Santee School District
P.O. Box 3115
La Mesa, California 92041

Richard W. Harris
Environmental Horticulture
University of California
Davis, California

H. Thomas Harvey
Professor, Ecology
San Jose State
San Jose, California

Nick Hetzer
International Ecosystem University
300 Eshleman Hall
University of California
Berkeley, California

Willis W. Harman
Stanford University
Palo Alto, California 93405

* Jerry Irwin
Corbett School
500 Corbett
San Francisco, California 94114

Warren Johnson
Geography Department
San Diego State College
San Diego, California 92115

Robert Johnson
Teacher, High School
Norago, California

* These persons are familiar and/or have used the Group for E.E. curriculum materials, Philadelphia, Pa.

Harvey Kirk
Department of Biology
Santa Monica City College
Santa Monica, California

Member of advisory committee, Earth Science Education Program, and writer of Environmental Studies Curriculum.

Benjamin Kronnick
Director, Riverside Environmental Sciences
Curriculum Project
Riverside, California

Jerry Kindred

Project Director: Tools for Change, A Carnegie Corporation Research. (a "Development and Training project in teacher training, process education and problems solving. Working with 3 school districts, 30 teachers, and a staff of 12, the project develops, produces materials for, tests, and evaluates a model teacher training program)

Ed Labinowich
Assistant Professor of Education
San Fernando Valley State College
Northridge, California

Wrote "A Closer Look at E.E." (Science and Children, March 1971)

Daniel B. Luten
Department of Geography
University of California
Berkeley, California 94720

Ronald B. Linsky, Director
Marine Science Floating Laboratory
Orange County Schools
1104 West 8th St.
Santa Ana, California 92701
(714) 834-3968

* Donna Lifshin
6100 Chabot Road, Apt. B
Oakland, California

* Eliot Levinson
730 Sutter Avenue
Palo Alto, California 94306

Jeanne Mc Cormick
International Ecosystem University
300 Eshleman Hall
University of California
Berkeley, California

Philip Miller
Department of Biology
San Diego State College
San Diego, California 92115

Dr. Mario M. Menesini
Director of Educ. Consulting Service
89 Orinda Way, Suite 6
Orinda, California 94563
(415) 254-3940

Formerly with the University of California and now Dean of Education at JFK University, and Director of the Native American Affairs Institute. Because of his experience with the Far West Lab., and as the director and developer of the National Environmental Education Development (NEED) program for the National Park Service he has established the Ed. Consulting Service with a staff "which knows where the educational action is."

Marc McGinnis
Community Environmental Council
Santa Barbara, California
(805) 963-7739

Professor G. Gary Malin
Professor of Cultural Ecology
Riverside University
3819 17th Street
Riverside, California 92502
(714) 682-8411

* These persons have used and/or are familiar with the Group for E.E. curriculum materials from Philadelphia, Pa.

Roderick Nash
Co-chairman Environmental Studies
University of California
Santa Barbara, California 93106

Allen Nadler, M.D.
Assistant Clinical Professor of Medicine
Stanford University

He helped prepare the Scientists Institute for Public Information workbook on air pollution.

* Doreen Nelson
11355 Farlin Street
Los Angeles, California 90049

Theodore Osmundson
President of ASLA Foundation
Theodore Osmundson & Associates
Landscape Architects
206 Sansome Street, Suite 300
San Francisco, California 94111

* Ula Pendleton
Westchester High School
7400 W. Manchester
Los Angeles, California 90045

Louis Pakiser Jr.
Office of Earthquake Research and Crustal Studies
United States Geological Survey
Menlo Park, California

Member of Science Advisory Committee, Earth Science Ed. Program.

* Gus J. Petropoulos
Skyline College
3300 College Drive
San Bruno, California 94066

* These persons have used and/or are familiar with the Group for E.E. curriculum materials developed in Philadelphia, Pa.

John H. Phillips, Ph.D.
Director, Hopkins Marine Station
Stanford University

Sally Reid
Teacher, High School
Los Angeles, California

* Nancy Van Ravenswaay
Del Mar Community School
105 Avenida Miraflores
Belvedere Tiburon, California 94920

Arnold Schultz
Professor, School of Forestry Conservation
University of California
Berkeley, California 94720

Participant in IDS 120 course.

* Jilda Sullivan
Laguna Honda
San Francisco, California

Ben Shaine
Environmental Studies
University of California
Santa Cruz, California

* Richard L. Sperisen
San Mateo City School District
50 Penninsula Avenue
San Mateo, California

Grover Stevens
Professor, Biology
University of California
Irvine, California

* These persons have used and/or are familiar with the Group for E.E. curriculum materials from Philadelphia, Pa.

* Mrs. Richard Sorenson
School of Family Sciences
San Diego State College
San Diego, California 92115

Dr. Erwin H. Sasman
Director, Regional Supplementary Education Center
Office of Kern County Superintendent of Schools
1415 Truxton Avenue
Bakersfield, California 93301
327-2111 Ext. 2649

Norman Sanders
Professor, Dept. of Geography
University of California
Santa Barbara, California

George Turner, Chairman
Department of Science & Mathematics Education
California State College
800 North State College Blvd.
Fullerton, California 92361

Turner has written Environmental Studies Curriculum.

Mrs. Ella Mae Turner
1049 South Cloverdale Avenue
Los Angeles, California 90019
(213) 934-0059 or 937-3210
Chairman National Advisory Council on E.E.

She is a teacher with extensive experience in urban and minority community affairs and has been on Advisory Committees for many of these projects. Miss Turner has taken special educational courses in her field of work which have served to enlarge her knowledge of human relationships.

William Taylor
E.E. Specialist, National Park Service
Federal Bldg.
San Francisco, California

He is very knowledgeable about persons active in the field of E.E.

* These persons have used and/or are familiar with the Group for E.E. curriculum materials, from Philadelphia, Pa.

Georg Treichel
Associate Professor of Geography and
Environmental Studies
San Francisco State College
Lake Merced, San Francisco, California 94132

Joseph Tomchak
Orange Coast College

He is familiar with Miami-Dade Jr. College, Florida curriculum, Man & Environment.

* Miss T. Thomas
De Anza Jr. High
2060 Cameron Street
Ventura, California

Susan Tessesm
Teacher, Grade Six
San Diego, California

Judy Van Windle
Teacher, Grade 5 and 6
Pacific Grove, California

Carlo Vecchiarelli
Chabot College

He is familiar with Miami-Dade Jr. College, Florida curriculum, Man & Environment.

Mr. Robert Wells, Director
Napa Experimental Forest, Title III
Napa, California

School with work program for potential dropouts.

Lee Waian
California State College
Fullerton, California

Writer of Environmental Studies curriculum.

* These persons have used and/or are familiar with the Group for E.E. curriculum materials, from Philadelphia, Pa.

Lynn D. Whittig
Division of Resource Sciences
University of California
Davis, California

Lynn White
Stanford University
Palo Alto, California 94305
(An expert on the philosophy of man and nature)

Mike Weber & C. L. Underwood, Consultants
Sacramento County Superintendent of Schools Office
6011 Folsom Blvd.
Sacramento, California 95819

Charles Wiederhold, Curriculum Consultant
Placer County Superintendent of Schools Office
1230 High Street
Auburn,California 95603

Peggy Wayburn
Sierra Club
30 Sea View Terrace
San Francisco, California
(415) 386-4241

Lucille Wendling
Teacher, Grade Five
San Diego, California

* Eric Watterud
El Sausal Jr. High
1155 E. Alisal Street
Salinas, California 93901

Miss Cynthia Wayburn
160 Michael Lane
Santa Cruz, California 95060
(408) 426-4417

Member of National Advisory Council on E.E. Miss Wayburn is a senior ecology student at the University of California. She has served as U.S. representative to the 1969 UNESCO Conference on Environment. Her mother is on the California Advisory Commission on State Conservation Education.

* These persons have used and/or are familiar with the group for E.E. curriculum materials, from Philadelphia, Pa.

John Zierold
Sierra Club Lobbyist
926 J Street
Sacramento, California
(916) 444-2180

COLORADO

STATE E.E. CONTACT:

George Ek
Consultant, Environmental Education
Improved Learning Unit
State Department of Education
201 East Colfax
Denver, Colorado 80203
(303) 892-3382

Provides encouragement and assistance to school districts at all grade levels in the planning, development, and implementation of environmental and outdoor education programs. Conducts inservice workshops for teachers and administrators. Coordinates school faculty summer workshop programs. Obtains, develops, and disseminates appropriate learning materials to the schools and presents programs to elementary, secondary, undergraduate, and graduate students.

STATE PLAN ACTIVITIES:

A proposal for FY 1972 monies under the E.E. Act was awarded for the development of a state plan for E.E. In addition, Richard Rocchio is administering a second grant which provides technical assistance to state E.E. planning organizations.

Dr. Richard S. Casebeer, Chairman
Colorado Master Advisory
Planning Council
c/o Richard Rocchio
Center for Research and Education
Denver, Colorado 80222
(303) 759-9935

or
c/o Walter Dickerson, Project Director
Colorado E.E. Master Plan
630 Sherman St.
Denver, Colorado 90203
(303) 573-6406

SCHOOL PROGRAMS AND ACTIVITIES:

Boulder Natural Science School (BNSS)

Thorne Ecological Institute provides unique outdoor education experience for children pre-school through high school. October BNSS summer classes, scheduled as field trips, explore forest, grassland, lake and stream habitats where children are introduced to ecological processes through examples of specific life-communities.

Jefferson Outdoor Laboratory School

Jefferson County Public Schools, Lakewood 80215, located about 9 miles west of Evergreen in the mountains. One of the first 11 National Environmental Education Landmarks in the country. Every 6th grader has the chance to spend 5 days at the school. Before they go their teachers review with them the subjects they will study at the school (geology, forestry, wildlife, astronomy and map reading). Support comes from private citizens with special skills (such as geologists) and state and federal fish and wildlife officers who visit on a regular basis. A new aspect of the program involves the use of volunteer high school students to work with the 6th graders. James R. Jackson is principal. About 165 6th graders are at the school each week during the school year.

Larry McKown of the Jefferson School District is project director of a grant awarded under the E.E. Act. FY 1972 monies are being used for:

Development of process curriculum for grades K-12.

Plains Conservation Center: Environmental, Outdoor and Historical Education
Mr. Edward Butterfield
Adams-Arapahoe School District #28
1085 Peoria Street
Aurora, Colorado 80010

Balarat Center for Environmental Studies

Jamestown, Colorado (1521 Irving Street, Denver 80204 - mailing address) Operated by School District #1 in the city and county of Denver (303) 266-2255 x 420, Director: Kenneth W. Horn.

It is located near Jamestown 47 miles northwest of Denver. The site consists of about 700 acres of Montana terrain with forests, streams, large hills, meadows, and a pond. Since Forest Service Policy permits special educational uses of land adjacent to such sites, the Denver Public Schools can anticipate the use of an additional 3,200 acres of Roosevelt National Forest land which lies adjacent to the site. There are programs for teachers

of outdoor/environmental education at the mountain site; the center is promoting district-wide concern for E.E. One staff member spends about two-thirds of his time working towards this goal and other staff members share in the task of developing concern for the urban environment and its associated problems. One accomplishment has been the preparation of the Denver Urban Environmental Guide for K-6. This guide has won acceptance by the local community, Denver teachers and national authorities in E.E. Another has been the distribution and implementation of the guide through E.E. representatives in each Denver Public School. Another has been the development and maintenance of an E.E. media center for all Denver Public School teachers. The Center contains over 500 books on ecology, nature and environmental concern, along with numerous samples of films, filmstrips, kits for measuring physical and biological factors of the environment, games records, etc. The latest innovation has been the addition of 5 high school seniors to the Balarat Staff which hopefully will be a forerunner to a career education program. The Balarat staff regularly prepares a newsletter that is used to inform district teachers of opportunities and activities in E.E.

Northern Colorado Educational Board of Cooperative Services
Executive Director: Walter Turner
Longmont
Colorado
*Coordinator of E.E.: Dr. Richard S. Casebeer
(303) 444-4987

The coordinator of E.E. provides assistance, guidance, and coordination of E.E. programs to school districts served by the Board: programs have been established in some of the districts; for instance, the Poudre R-1 District in Fort Collins, in cooperation with the Colorado State University, has developed the Northern Colorado Outdoor Nature Center, an 80 acre tract along the valley of Cache la Poudre River near Fort Collins. The center has marked trails, information and guide books. As a result of an intensive series of workshops and in-service programs conducted by Colorado State University and N.C.E. BOCS personnel, the Nature Center is widely utilized by teachers in the Fort Collins and Loveland area. (The Board Media Center has available over 100 environmental films.)

The Larimer R-2J School District in Loveland and Berthoud has developed a multidisciplinary K-6 Environmental Studies instructional guide containing many suggestions for nature study and environmental activities. Adams 12 and Adams 50 School District in Thornton-Northglenn and Westminster have both developed a number of secondary level courses training - cooperative graduate courses in Outdoor Education and E.E. with the University of North Colorado, University of Colorado, and School District #1 - compensated inservice programs.

The Center is that part of the Denver Public Schools that is exclusively devoted to the concept of E.E.

Biology teachers in Fairview High School in the Boulder RE-2J School District have regularly conducted a 3 day field experience for students in their biology classes. Larimer R-3 School District in Estes Park offers a course in the sociological aspects of environmental problems. Boulder RE-1J School District in Longmont and St. Vrain Valley conducts a summer Environmental Discovery School providing a one-week ecological camping experience for junior high school students.

Dr. Casebeer has been working closely with the Center for Research and Education in formulating the Master Plan for E.E. for the State of Colorado. In his capacity as Chairman of the Education Committee of the Master Advisory Planning Council (MAPC), he is familiar with the thinking of many concerned educators. He was elected for the 2nd phase of planning as Chairman of (MAPC) Master Advisory Planning Council which is the citizens advisory group for the project. Past Chairman of MAPC was Dr. Vince Cyphers. Dr. Casebeer received a grant from OEE FY 72 funds for community/school based curriculum development for the school districts served by NCEBOCS.

Mr. Dan Van Gorp
Cherry Creek Senior High School
9300 East Union
Englewood, Colorado 80110

High Trails Outdoor Education Program
Paul Forister
Colorado Springs School District #11
1115 North El Paso Street
Colorado Springs, Colorado 80903

East High School Senior Seminar
Mr. Craig Spellman
1545 Detroit Street
Denver, Colorado 80206

INTERESTING FACTS:

Littleton

This town won a government award from the Rocky Mountain Center for Environment for its innovative Littleton Plan, containing land use recommendations and flood plain management plans. Under this plan the City will purchase and preserve as open space and park a

2-mile stretch along both sides of the Platte River. Army Corps of Engineers' plans originally called for channelization of the river which would have permitted construction in the flood plain zone right up to the bank of the river. Under the leadership of Larry Borger, former town manager, the Littleton Plan was developed and approved by the citizens in a special bond election.

COLLEGE AND UNIVERSITY ACTIVITIES:

Colorado State University Nature Center

Mr. Howard Bruner
Department of Education
Room 214, Liberal Arts
Colorado State University
Fort Collins, Colorado 80521

Northern Colorado Outdoor Nature Center Project
Colorado State University
Fort Collins, Colorado 80521
Dr. Howard Bruner: Director

The Northern Colorado Nature Center is an 80 acre tract of cottonwood bottomland located 3 miles southeast of Fort Collins. The Center stands on the flood plain of the Cache la Poudre River, with the river cutting diagonally across the property. The area serves as an outdoor lab for E.E. and is administered by Colorado State University.

Denver Community College
1001 E. 62nd Avenue
Denver, Colorado 80216
Project Director: David Braman

Awarded FY 1972 monies under the E.E. Act for:
Development of a process curriculum for community colleges focusing on the analysis of urban educational institutions.

The following students completed these projects and presented reports at the December 1971 meeting of The American Association for the Advancement of Science:

Design of a Migrant and Rural Farm Worker Housing Community
Mr. Eloy Soza
c/o Dr. Ralph E. Williams
Department of Mechanical Sciences
And Environmental Engineering
University of Denver
Denver, Colorado 80210

Development of a Multiple Use Plan for the Colorado State Forest
Mr. James R. Zuboy
c/o Dr. Howard Alden
Department of Outdoor Recreation
Colorado State University
Fort Collins, Colorado 80521

Biological Sciences Curriculum Study
University of Colorado
P.O. Box 930
Boulder, Colorado 80302

GROUPS AND AGENCIES WITH AN INTEREST IN E.E.:

Mr. Henry Lansford, Information Officer
National Center for Atmospheric Research (NCAR)
Boulder, Colorado

integrates national research efforts in the atmospheric sciences. This effort conducted by scientists in universities, government laboratories, and other institutions, is aimed at achieving a deep understanding of the total behavior of the atmosphere.

Mrs. Joan Maier
National Oceanic and Atmospheric Administration (NOAA)
Concerned with the total environment, including the earth, nearby interplanetary space, and the sun. It brings together environmentally oriented agencies from the Departments of the Interior, Transportation, Navy and Army and the National Science Foundation, in addition to the Commerce Department. NOAA's Environmental Research Laboratories located in Boulder conduct research on the total environmental system, including the solid earth, oceans, lower and upper atmospheres, and near space.

Institute of Arctic and Alpine Research
University of Colorado
Facilities include an expanding group of laboratories, staff research offices, the mountain library and the office of the scientific journal, Arctic and Alpine Research. The institute also maintains the Mountain Research Station 25 miles west of Boulder.

Cooperative Institute for Research in Environmental Sciences (CIRES)
A joint project of the University of Colorado and the Environmental Science Services Administration. This institute is devoted to research and advances training in solid earth geophysics, oceanography, radio propagation, the physics of upper and lower atmospheres, and solar-terrestrial relationships. It serves as a center for

multi-disciplinary collaboration of research workers from Boulder and institutions throughout the world. A visiting fellowship program enables scientists working in these fields to spend time with CIRES.

Rocky Mountain Mineral Law Foundation
Fleming Law Building, University of Colorado
A nonprofit corporation devoted to the advancement and improvement of oil, gas, water, and mining law through continuing research and continuing legal education. Membership includes Rocky Mountain area law schools, bar associations, and mining, oil, and gas associations.

Mr. Robert Gonring
Department of Health
4210 E. 11th Avenue
Denver, Colorado 80220

Mr. Tom Ten Eyck
Department of Natural Resources
1845 Sherman
Denver, Colorado 80203
The Game, Fish, and Parks Division of this department provides one-half the budget for the E.E. consultant in the Department of Education since this consultant handles a major part of the conservation - E.E. program of this division.

GROUPS WITH AN INTEREST IN E.E.:

Social Science Education Consortium Inc.
855 Broadway
Boulder, Colorado 80302
Executive Director: Irving Morrissett
(303) 443-1370

SSEC's membership includes "highly-respected authorities in education and the various social sciences. Staff includes personnel with expertise and experience in group process, conflict management, values analysis, evaluation, learning theory and pedagogy, classroom teaching at secondary and elementary levels, teacher training, and administration and management. The staff has extensive experience in newsletter publication, information network development and operation, and environmental education materials analysis and program development." In addition, the SSEC operates the ERIC Clearinghouse for Social Studies/Social Science Education and houses "one of the most extensive collections of innovative curriculum materials and programs in social science education in the U.S."

SADMESS (Students Assisted Development for the Environmental and Social Studied) funded under the E.E. Act for FY 1971.
Project of: Social Science Education Consortium Inc., Boulder, Colorado

Pueblo Beautiful Association
314 E. 7th Street
Pueblo, Colorado 81003
President: Gladys Comi
(303) 543-6006

AAUW, Fort Collins Branch
1008 East Elizabeth
Fort Collins, Colorado 80521
President: Mrs. Lela Hyder
(303) 484-0752
Educational efforts are being made by many volunteer groups, including the Fort Collins Branch of the AAUW to generate citizen interest in preserving the lower Poudre River.

Ecological Consumers Organization (ECO)
Durango, Colorado 81301

League of Women Voters
Jefferson County
The League has studied various aspects of environmental problems for the past 8 years. They have a committee on solid waste.

Ms. Patricia Perry
League of Women Voters
Denver County
They have a transportation committee and other related activities

Aspen Institute for Humanistic Studies
P.O. Box 219
Aspen, Colorado 81611
President: Joesphy Slater
(303) 925-7010
A private educational foundation. Primarily through the Aspen Executive Program it offers a special kind of continuing education for business leaders, and leaders in the fields of education, labor, government, science, the arts, and the professions. "The basic objective of the program is to provide a better understanding of man, his social and physical environment, and the bewildering process of change itself." In addition to this program, the institute

sponsors a number of related and reinforcing workshops, conferences, seminars, lectures, exhibits, and a Scholars-in-Residence Program. These supporting activities are directed to "Five key issues of the Seventies:" Environment and the Quality of Life; Science, Technology and Humanism; Justice and the Individual; Basic Educational Reform; The Communications, Media and Society.

Wright-Ingraham Institute, Inc.
1228 Terrace Road
Colorado Springs, Colorado 80904
Director: Elizabeth Wright-Ingraham
(303) 633-7011
"A non-profit corporation established to promote, direct, encourage, and develop educational opportunities contributing to the conservation, preservation, and use of human and natural resources." The Institute has coordinated an urban studio with a field laboratory and program for scholars, students, artisans, and interested people. The combined resources are known as the Environmental Workshop. "The prime purpose of the Environmental Workshop is to discover the shape and structure of an ecologically-adapted, place-rooted, learning community and to organize a rationale for such a community in terms of an appropriate supporting physical plant, technology, and institutional pattern." In 1970 the Institute bought 640 acres of plainsland on Running Creek in Elbert County, for a field laboratory.

Colorado Citizens for Clean Air
5850 E. Jewell
Denver, Colorado 80222
(303) 757-5439
Chairman: Gerald L. Jensen

San Juan Ecological Society
P.O. Box 3113
Durango, Colorado 81301
President: Dr. Carroll Peterson
(303) 247-7478
"The Society is dedicated to the devotion of the human resources of the San Juan Basis and to the preservation and enhancement of the quality and beauty of its natural environment."

The Savings League of Colorado

It won the business and industry award for its sponsorship of two Environmental Housing conferences from the Rocky Mountain Center on Environment. Representatives of the construction and housing industry from throughout Colorado attended the 1970 and 1971 conferences which dealt with new ideas in land development and subdivision planning. The League, a savings and loan industry trade association, was commended for its leadership in promoting more environmentally responsible housing patterns.

Rocky Mountain Center for the Environment
Robert P. Hansen, Executive Director
East Evans Ave.
Denver, Colorado 80222
(303) 757-5439
The Center was created in order to maintain and enhance a quality environment throughout the Rocky Mountain States by providing services to public and private individuals and organizations concerned with seeking solutions to environmental problems. These services include organizational assistance, office functions, legal assistance, conference and workshop services, research information, and communications.

The Mountain View Center for Environmental Education
Dr. David Hawkins
1441 Broadway
Boulder, Colorado 80302

Ecology Action of Pikes Peak Region
P.O. Box 951
Colorado Springs, Colorado 80901

Committee on Environment
P.O. Box 1131
Greeley, Colorado 80631

Ms. Kathy Webster
Colorado Ecological Academy
Box 1484
Denver, Colorado 80201

Eco-act, Aurora Central High
1050 Newark
Aurora, Colorado 80010

Eco-Center
1424 Pearl, #7
Boulder, Colorado 80302
Member of Ecology Center Communications Council

Conservation Library Center of North America
Miss Kay Collins
Conservation Subject Specialist
1357 Broadway
Denver, Colorado 80203
(303) 266-0851
The Center collects information covering the conservation movement throughout the world. It develops and provides nationally the library resources and services to meet the informational needs of individuals, citizen groups, and public and private organizations whose objectives are ecologically sound natural resource policies for a quality environment through research, education, and other methods.

Colorado Committee for Environmental Information
2595 Stanford Avenue
Boulder, Colorado 80303
One of the Scientists Institute for Public Information affiliated information committees.

The Arrow Company

Ecological Education
3385 South Bannock
Englewood, Colorado 80110
General Manager: William R. Scott
789-2803
The Arrow Company was founded on Earth Day, 1970 in Denver. It is the parent company of a group of smaller organizations with more limited objectives. The company plans to engage "in all activities that will seek to improve, conserve, or restore the quality of the environment for the biosphere-earth." It seeks to achieve its

objectives through joint application of management, environmental studies, engineering. As a management consultant firm in the environmental sciences it offers these services: educational programs and research studies in ecology, outside consultants in environmental sciences, access to over 40 industrial firms in pollution control and abatement, combustion and incineration studies, engineering studies, cost analysis of pollution control methods. The company has at its disposal an extensive file of information, data on local and state laws, and local environmental problems. The ecological education of the general public is of importance to the company. They have published an annotated bibliography on ecology and the environment, "Where Have All the Flowers Gone?" The company can offer these educational services: a recommended reading program, a recommended study program, a recommended action program.

Thorne Ecological Institute

1229 University Avenue
Boulder, Colorado 80302
(303) 443-4480
Dr. David Zimmerman, Board Member
Privately owned, non-profit, tax-exempt corporation, established in 1954; independent of governmental and political influences. Designed to stimulate education, communication and action toward identifying and solving environmental problems. Runs nationally recognized seminars for ecologists and leaders from all sectors of American society, conducts and sponsors educational programs for children and adults, provides ecological consulting services.

Colorado Open Space Council
1742 Pearl Street
Denver, Colorado 80203
(303) 623-5558
Ms. Vim Wright
The Denver-Boulder region has a large and active citizen-conservationist contingent. There are at least 60 well established citizens' organizations in the area. Most of these groups belong to the Colorado Open Space Council, a coordinating organization which unifies their environmental activities. The high level of local citizen activity in environmental matters won support from the Ford Foundation to establish the Rocky Mountain Center on the Environment in 1967, a service organization which assists the citizen-activist groups in the clerical and research needs.

Members

- Aiken Audubon Society
- American Society of Landscape Architects, Colorado Section
- Arapahoe Medical Society
- Association for Beautiful Colorado Roads
- Bicycles Now!
- Circle I, First Plymouth Congregational Church
- Citizens Concerned about Radiation Pollution
- Clear Creek Valley Medical Society
- Colorado Citizens for Clean Air
- Colorado Guides and Outfitters
- Colorado Federation of Women's Clubs
- Colorado Hawking Club
- Colorado Institute on Population Problems
- Colorado Mineral Society
- Colorado Mountain Club
- Colorado State League of Women Voters
- Colorado White Water Association
- Consulting Engineers Council of Colorado
- Denver Audubon Society
- Denver Field Ornithologists
- Environmental Corps - CSU
- Interprofessional Committee on Environmental Design
- Metropolitan Wildlife Association
- Mountain Area Planning Council
- National Speleological Society, Colorado Grotto
- PLAN-Aurora
- PLAN-Boulder
- Planned Parenthood of Colorado
- Protect our Mountain Environment
- Regional Parks Association
- Rocky Mountain Chapter, Sierra Club
- Springs Area Beautiful Association
- Trout Unlimited, Cutthroat Chapter
- Wildlife 2000
- Women's Environmental Coalition
- Zero Population Growth

Cooperators

- American Camping Association, Rocky Mountain Section
- Around the Seasons Club
- Center for Research and Education
- Colorado Division, UNA-USA-UNESCO
- Colorado Wildlife Federation
- Denver Botany Club
- Izaak Walton League of America, Colorado Division
- Nature Conservancy
- PLAN-St. Vrain
- Thorne Ecological Foundation

POSSIBLE RESOURCE PERSONS:

Penny Ashby
Lake Junior High School
Denver, Colorado
Writer for Environmental Studies.

Barbara Baker, Chairman
Steering Committee, Environmental Task Force
Box 3682
Aspen, Colorado 81611
or Box 3145
Aspen, Colorado 81611

Bobbie Bishop
Rocky Mountain Center on Environment
4260 East Evans
Denver, Colorado 80222

Mrs. Louise Bradley
PLAN-Boulder County
Member of Colorado Environmental/Ecological Education Master Advisory Planning Council

Edward Butterfield
Aurora
A biology teacher; received the 1971 award for leadership in E.E. from Rocky Mountain Center for Environment. In his career with the Aurora public schools he has served as sponsor of the high school biology club, including the ecological awareness of the student members. He also is head teacher of a summer outdoor educational program aimed principally at children from low income families. Since 1970 he has been director of the Plains Conservation Center, an outdoor lab for the study of the natural environment. He programs a variety of field trips throuth this three square mile prairie.

Jack Carter
Department of Biology
Colorado College
Member of advisory committee, Earth Science Education Program.

Donald Campbell
USDA Forest Service
District Ranger
1919 14th Street
Boulder, Colorado 80302

Mrs. Mildred Cline
Denver housewife
Member of Colorado Environmental/Ecological Education Master Advisory Planning Council

Ed Connors
Colorado Open Space Council
Member of Colorado Environmental/Ecological Education Master Advisory Planning Council

Kay Collins
Conservation Specialist
Conservation Library
Denver Public Library
Also: President, Denver Audubon Society
She is very active with several environmental groups in the area, and is a member of the Colorado Environmental/Ecological Education Master Advisory Planning Council.

V. A. Cyphers
Coordinator, Outdoor Education Program
College of Education
University of Northern Colorado
Greely, Colorado 80631

Gerald DeFries
As principal of the Aspen Middle School from 1966-70, he initiated innovative programs which have brought him recognition as a leading administrator of the middle school philosophy. He currently serves as an Environmental and Outdoor Education Consultant.

COLORADO

Dr. Robert E. Dils
Dean, Colorado State University College of Forestry and Natural Resources
Head of Eisenhower Consortium for Western Environmental Forestry Research

Rowne Danbom
Recipient of media award from Rocky Mountain Center on Environment: selected for her work in uncovering and publicizing the threat to public health created by the radioactive tailings used in Grand Junction housing construction. As public relations officer of the Colorado Department of Public Health, she was one of those principally responsible for the nationwide attention finally received by this long-brewing problem.

Robert A. Downs
Colorado Department of Health
Colorado Environmental/Ecological Education Master Advisory Planning Council

James Garcia
Associate Director
Denver Metropolitan Urban Coalition
1711 Pennsylvania
Denver, Colorado 80203

Regis Groff
New Humanities Program--Intellectual Black History
Denver University
Denver, Colorado 80210

Nicholas Helburn, Chairman
Department of Geography
University of Colorado

Suzanne Wiggins Welburn, Co-director
SSEC's SADNESS environmental curriculum development program
Also: Professor of Economics at the University of Colorado
Denver Center.

Eldon Halingstad
Regional Environmental Officer
Department of HUD
14028 Federal Building
Denver, Colorado 80202
(303) 837-3671

Roger Hansen, Executive Director
Rocky Mountain Center on Environment
4260 E. Evans
Denver, Colorado 80222
(303) 757-6640

Mrs. Beverly Fleming
Keep Colorado Beautiful, Inc.
4260 E. Evans
Denver, Colorado 80222
(303) 757-2272

Ms. Pamela Fraser
KRMA TV, Channel 6
Member of Colorado Environmental/Ecological Education Master Advisory
Planning Council

Robert W. Gouring
Colorado Department of Health
Colorado Environmental/Ecological Education Master Advisory Planning
Council

William N. Galer
Colorado Department of Health
Member of Colorado Environmental/Ecological Education Master Advisory
Planning Council

Charles Gaylord, M.D.
Colorado Trudeau Society
Arapahoe County Medical Society
Member of Colorado Environmental/Ecological Education Master Advisory
Planning Council

David Hawkins
Department of Philosophy
University of Colorado
Member of Advisory Committee, Earth Science Education Program

Dwight Hamilton
Head naturalist and interpreter
Rocky Mountain National Park

Gary Hansen
Pesticide Supervisor
Environmental Protection Agency
Denver Federal Center
Denver, Colorado 80225

William Howard
Professor of Geography and Urban and Regional Planning
University of Denver
(Has Ph.D. in Urban Geography and Urban and Regional Planning,
School of the Built Environment, University of Edinburgh, Scotland)

Charles Inghram
Sanitary Engineer, sewage treatment plant
Fort Collins Municipal Building
(Specialist in water pollution, clean water)

*Carlene Elna Johnson
9775 W. 73rd Avenue
Arvada, Colorado 80002

*William Kingsley
Thomas Jefferson High School
3950 S. Holly Street
Denver, Colorado 80237

Richard Lamm
Professor of Law
University of Denver, College of Law
Also: Director of Rocky Mountain Center of Environment, and membership in other environmental groups. (His legislative and legal interests include those related to the environment.)

Ive E. Lindauer
Associate Professor of Botany
University of Northern Colorado 80631

*These persons are familiar with and/or have used the Group for Environmental Education curriculum materials from Philadelphia, PA

Ed Maruna
North Arvada Junior High School
Arvada, Colorado
Writer of Environmental Studies curriculum

William V. Mayer, Director
Biological Sciences Curriculum Study
University of Colorado
P.O. Box 930
Boulder, Colorado 80302

James Monaghan, Chairman
Environmental Corps
Colorado State University
Box 711, Student Center
Fort Collins, Colorado 80521
(303) 491-5768

Ved Nanda
Professor of International Law
University of Denver
Denver, Colorado
Interested in international environmental developments.

Jim L. Ogilvie, Manager
Water Department
City and County of Denver
144 West Colfax Avenue
Denver, Colorado 80202

Alice Ogura
Environmental Education Specialist
Balarat Office
Balarat Center for Environmental Studies
Helped prepare Balarat Field Guide

Norbert LeFoy Von Osten
High School Teacher-Counselor
Arapahoe County Public Schools
8133 Logan Street
Denver, Colorado 80229

Dr. Robert W. Pennak, Chairman
Division of Environmental Biology
University of Colorado
Boulder, Colorado 80302

Ronald Passarelli
902 Stonewall Avenue
Trinidad, Colorado 81082
Member of 1971 International Youth Conference on the Human Environment

Stephen Poindexter
450 S. Lafayette Street
Denver, Colorado 80209
(303) 777-4577
He is a research assistant to Representative R. D. Lamm working on legislative research on environmental bills.

Phillip Stern
Boulder Environmental Council
998 - 6th Street
Boulder, Colorado 80302

Owen Smith
Science Coordinator
Poudre R 1
(specialist in outdoor curriculum and teaching techniques)

W. R. Scott
Balarat Center for Environmental Studies
Denver Public Schools
1521 Irving Street
Denver, Colorado 80204

Maxwell A. Snead, Junior
Snead and Wright, Attorneys at Law
2000 Gaylord Street
Denver, Colorado 80205
(303) 321-6736
A practicing attorney in Colorado who engages in environmental litigation. Has agreed to act as consulting attorney for Colorado Environmental Legal Services, Inc.

*Bill Stevens
855 Broadway
Boulder, Colorado 80302

Charles Turner, Science TEacher
Poudre R 1
(expert in esthetic and sensory experiences, outdoor crafts)

James Gregory Thomas, Consultant
Colorado Ecological Academy
Box 1484
Denver, Colorado 80201

Mrs. Marlene Wilson, Director
Volunteer and Information Center of Boulder County
2045 - 13th Street
Boulder, Colorado 80302

Joseph Weitz
Department of Geology
Colorado State University
Member of Advisory Committee, Earth Science Education Program

Hobart Wagener
Fellow, American Institute of Architects
Vice President, Colorado Council of the American Institute of Architects
737 - 29th Street
Boulder, Colorado 80302

Catherine L. Webster
Denver Public Schools
Balarat Center
Box 1484
Denver, Colorado

*These persons have used and/or are familiar with the Group for Environmental Education curriculum materials developed in Philadelphis, PA

Dr. Beatrice Willard, President
Thorne Ecological Institute
1229 University Avenue
Boulder, Colorado 80302
(A trained practicing plant ecologist who has created, organized, and managed several environmentally oriented programs)

Eugene Robert Weiner
Professor of Chemistry
University of Denver
Also: Consultant to U. S. Geological Survey, Water Resources Division.
(He is very active in community service and conservation activities)

RESOURCE MATERIALS ARE AVAILABLE FROM:

1. Northern Colorado Outdoor Nature Center
   Poudre School District
   R 1
   Colorado State University
   Fort Collins, Colorado

   a. Poudre R 1 School District E.E. Activity Booklet (K-12)
   b. K-12 Curriculum Guide for E.E.
   c. Trails Tips - a Teachers' Manual

2. Balarat Center for Environmental Studies

   a. Balarat Field Guide - grades K-12, 1971, 60 pages.
   b. Denver Urban Environmental Studies for Grades K-6, 1971

3. Colorado State University Nature Center
   Mr. Howard Bruner
   Department of Education
   Room 214, Liberal Arts
   Colorado State University
   Fort Collins, Colorado 80521

   a. Teachers Guide

4. State Department of Education
   430 State Office Building
   201 East Colfax Street
   Denver, Colorado 80203

   a. A Multi-Disciplinary Learning Strategy Using In-Class and Out-of-Class Learning Environments
   b. Environmental/Conservation and Outdoor Education Programs in Colorado
   c. Curriculum Guide in Conservation Education
      Also: Conservation Illustrated - supplement to preceding

HAWAII

STATE E.E. CONTACT:

Dr. Patsy Saiki, Administrator
State Department of Education
1270 Queen Emma Street
Room 902
Honolulu, Hawaii 96813

STATE PLAN ACTIVITIES:

The Department of Education is responsible for the development of a kindergarten through grade twelve curriculum, an important portion of which is designated as environmental studies.

State-Level Advisory Committee: An Environmental Council composed of 15 citizens at large serves to advise the Office of Environmental Quality Control and the government on all environmental matters. All are appointed by the Governor upon the recommendation of private conservation organizations. The Director of Environmental Quality Control is chairman and meets monthly or as often as necessary with the Council.

SCHOOL PROGRAMS AND ACTIVITIES:

The Foundational Approach in Science Teaching: an ecology, physical science program for grades seven through nine - presently is being piloted in public schools and will be revised as needed through the University. In anticipation of the present need for environmental curricula, the Foundational Approaches in Science Teaching (FAST) project was begun in 1967 by the Curriculum Research and Development Group, College of Education, University of Hawaii to produce a sequential three year science program for the intermediate schools of the State of Hawaii. The content of FAST is multi-disciplinary. The presentation mode is field and laboratory inquiry. FAST 1 and 2, in the first two years of the three year program, have been installed in public and private schools of the State of Hawaii. FAST 3, the third and final year has been tested. Teachers remain to be trained to use it.

Resident Outdoor Programs: There are four outdoor programs operating in the state, involving 10,000 students.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Environmental Center
University of Hawaii

Air Pollution Task Force
University of Hawaii

Water Resources Research Center
University of Hawaii
2525 Correa Road
Honolulu, Hawaii 96822

In anticipation of the present need for environmental curricula, the Foundational Approaches in Science Teaching (FAST) project was begun in 1967 by the Curriculum Research and Development Group, College of Education, University of Hawaii to produce a sequential three year science program for the intermediate schools of the State of Hawaii. The content of FAST is multi-disciplinary. The presentation mode is field and laboratory inquiry. FAST 1 and 2, in the first two years of the three year program, have been installed in public and private schools of the State of Hawaii. FAST 3, the third and final year has been tested. Teachers remain to be trained to use it.

Herbert Weaver
Professor of Phychology
Bachman Hall, 2444 Dole Street
University of Hawaii
Honolulu, Hawaii 96822
(808) 944-8414

He is implementing a program in Environmental Psychology at the University of Hawaii.

Environmental Studies Committee
Hilo College, University of Hawaii
Chairman: John Healy

The Committee has drawn faculty together from many of the academic disciplines at the College and staff researchers from the agricultural and cloud physics labs associated with the University of Hawaii at Hilo. It has maintained close liason with the Hawaii County government; one of its members is a staffer from the Hawaii County Planning Department.

Steven L. Montgomery
c/o D. Elmo Hardy
Department of Entomology
University of Hawaii
Honolulu, Hawaii 96822

Carried on a study project of Ecology of the Hawaiian Drylands and reported of it at the December 1971 meeting of the American Association for the Advancement of Science.

Michael Osato
c/o John G. Chan
University of Hawaii, Hilo College
Hilo, Hawaii 96720

Carried on a study project on Biological, Chemical, and Sociological Consequences of Pollution in Hilo Bay, Hawaii and reported on it at the December 1971 meeting of the American Association for the Advancement of Science.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Resources Agency - Activities and Responsibilities: The Office of Environmental Quality Control is responsible for coordination of all state agency efforts in environmental control, consultation with all state agency efforts in environmental control, consultation with other state departments including the Department of Education on environmental education, legislative efforts, monitoring of the environment, and liaison with federal and city environmental personnel. The Office of Environmental Quality Control has, by legislative mandate, responsibility to aid education in environmental matters. The Office of Environmental Quality also controls the Environmental Center at the University of Hawaii for coordination at the University level.

Department of Health
Box 3378
Honolulu, Hawaii 96801

Water pollution control program.

Department of Land and Natural Resources
Box 621
Honolulu, Hawaii 96809

James Harpstrite
Principal, High School Division
The Kamehameha Schools
Kapalona Heights
Honolulu, Hawaii 96817

Environment Group/Hawaii
P. O. Box 1618
Honolulu, Hawaii 96806

To devise feasible solutions to environmental problems in Hawaii and to educate the public, government agencies, and business to these problems and the practical answers.

Hawaii Association of Conservation
P. O. Box 91
Volcano, Hawaii 96785
Contact: N. Castle

Sierra Club
University of Hawaii Chapter
2243 Sea View
Honolulu, Hawaii 96822

Windward Eco-Action
214 Aikapa Street
Kailua, Hawaii 96735
(808) 254-1177
Contact: C. Jones

Hawaii Citizen's Council
1186 Fort Street, Room 204
Honolulu, Hawaii 96813
(808) 533-1078
Contact: R. D. Swanson

<u>POSSIBLE RESOURCE PEOPLE</u>:

John Healy
Chairman, Environmental Studies Committee
Hilo College, University of Hawaii

IDAHO

STATE E.E. CONTACT:

Harry C. Mills, Chairman
Idaho Advisory Committee on E.E.
Len B. Jordan Office Building
Boise, Idaho 83720
(208) 384-2205

State-Level Advisory Committee

An Advisory Committee on Environmental Education composed of representatives of the State Department of Education, State Department of Public Lands, State Fish and Game Department, U.S. Soil Conservation Service, Bureau of Land Management, National Parks Service, Bureau of Sport Fisheries and Wildlife, Soil Conservation Commission, Boise National Forest, Boise State College, U of I Cooperative Extension Service, Environmental and Community Services, U.S. Bureau of Reclamation, Idaho Parks and Recreation Department, has been established.

Membership is subject to confirmation by the State Board of Education. The representative of the State Department of Education serves as chairman.

The Advisory Committee has been successful in stimulating local sponsorship in several areas of a number of environmental education field days. It sponsors the Boise State College teachers' summer workshop. Some success was experienced with cooperative programs via State Garden Clubs regarding natural teaching areas on school grounds.

SCHOOL PROGRAMS AND ACTIVITIES:

Adams-Valley-Washington-Idaho County Joint Outdoor Program
Joe Frasier, Forester
U.S. Forest Service
McCall, Idaho 83638

A program spearheaded by the Forest Service and the Department of Fish and Game for 6th and 7th graders from seven mountain schools, once in the spring.

Caldwell Desert Environmental Program
Tom Moore, Principal
Wilson Elementary School
Caldwell, Idaho 83605

For Canyon County students. The curriculum, which uses resource people as teachers, was developed by teachers at Wilson Elementary School.

Robie Creek E.E. Program: A program which has been a cooperative effort of the Boise City schools and various conservation agencies in the area and is the largest E.E. program in the state.

Summer Camp for 5th, 6th, 7th graders
Merle J. Quigley
Bunreville School District
2900 Control Avenue
Idaho Falls, Idaho 83401

Environmental and Outdoor Education Survey
Dr. Glenn Morgan
Independent School District #1
12th and Lincoln
Lewiston, Idaho 83501

Lincoln County Desert Environmental Program
Kenneth Crothers, Superintendent
Shoshone Public Schools
Shoshone, Idaho

The Bureau of Land Management is working with others to develop an E.E. classroom in Cottonwood Creek, an area close to Boise.

The Department of Fish and Game has a network of five regional educators in various population centers who will assist any school or organization with E.E. These educators do consulting, develop programs, give lectures, etc. In addition, the department conducts a gun safety program which treats environmental ramifications and considerations. The program reaches close to 100% of the State's seventh graders.

Buhl Public School Environmental Education
Outdoor Activity Day
Robert Humphry, Science Supervisor
Buhl Public Schools

High school students trained in Environmental Education are used as resource individuals in conducting the outdoor activity day for upper elementary grades and junior high school students. These activities consist of instruction in water quality, land usage, wild life, plant life, music in Environmental Education, Art in Environmental Education, Mathematics in Environmental Education, etc.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Boise State College - Teacher Environmental Education Workshop
Dr. Donald Obe
Boise State College
Boise, Idaho 83707

Bureau of Mines and Geology
University of Idaho
Moscow, Idaho

M. Sydney Duncombe
Bureau of Public Affairs Research
University of Idaho
Moscow, Idaho 83843

Mr. Duncombe is project director of activities leading to the development of a process curriculum for rural community leaders. Funded with FY72 E.E. Act monies.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Malls Canyon Preservation Council
P. O. Box 691
Idaho Falls, Idaho 83401
Mr. S. L. Bradley
(208) 523-3426 (home)
(208) 522-6640 Ext 1455 (work)

Sends out newsletters with information about developments in the canyon. The organization also makes use of the local newspapers in Idaho Falls and has prepared shows for local television.

Mr. Jerry Jayne, President
Idaho Environmental Council
P. O. Box 3371
University Station
Moscow, Idaho 83843
(208) 882-3511, Ext. 6168

Lends out a slide show of unique features of the Idaho natural environment and its problems. The group has also worked on a project to develop a slide program for fifth and sixth grade and higher.

The Council was founded to coordinate the creative ideas, manpower, and the financial resources of conservation-minded organizations and individuals to stimulate an increased understanding and awareness of modern man's impact upon his environment through dynamic programs of information and education. Members engage in fact-finding and research of such activities in both universities and governmental agencies as well as

promote leadership from among participating organizations and individuals to create and implement programs of action. In addition, the Council lobbies at the state and federal levels for conservation and environmental quality.

Sun Valley Creative Arts Center
Kenneth Kinucan, Director of Environmental Studies
P. O. Box 181
Bellevue, Idaho 83313

During the summer of 1971, Mr. Kinucan initiated an environmental studies program under the direction of Mrs. Glenn Cooper, President of the Sun Valley Creative Arts Center. The series of courses included field trips to interpret the local biotic communities, laboratory sessions to explore animal and plant adaptations and workshops on regional environmental proglems including sewage and solid waste disposal and the impact of intensive land development on a rural setting.

The Center has been awarded FY 1972 monies under the E.E. Act for workshops focusing on environmental problems of the county.

Snake River Regional Studies Center
Donna Parsons, Director
College of Idaho
Caldwell, Idaho 83605
(208) 459-5214

POSSIBLE RESOURCE PERSONS:

Sam Stimple, Principal
Jefferson Elementary School
Boise, Idaho 83755

He is knowledgeable of the environmental education activities in the area.

Terry Armstrong
Professor of Science Education
University of Idaho
Moscow, Idaho 83843
(208) 885-6586

Ruthann LeBaron, Head
Science Department
College of Southern Idaho
Twinn Falls, Idaho
(208) 733-9554 Ext 254

Robert T. Gregory
Associate Professor of Recreation
Idaho State University
Pocatello, Idaho

Presented "E.E. Through State Educational Structures, Recreation and the Community School Concept" to the Select Education Subcommittee Hearing of H. R. 14753.

Mrs. Donna Parsons
Director, Title III project - "Cataloging Idaho's Natural Resources"
Caldwell, Idaho

Scott Reed, Attorney
Coeur d'Alene, Idaho

Winner of citizen environmentalist award from the Rocky Mountain Center on Environment. He has brought an environmental viewpoint to the Idaho Resources Board in taking a stand against the Lower Teton Dam. As chairman of the Coeur d'Alene Planning Commission, he achieved passage of a town sign ordinance, and he has provided legal expertise to many other environmental projects.

Mr. Richard Kay
Science & Math Consultant
Department of Education
State Office Building
Boise, Idaho 83707

Joseph C. Greenley, Director
Idaho Fish and Game Department

Dr. Lyle Stanford
College of Idaho
Caldwell, Idaho

Martel Morache
Conservation Educator for Information and Education Division
Fish and Game Department
P. O. Box 25
Boise, Idaho 83707
(208) 244-8471

James Underwood, Attorney
Payette, Idaho

He has served on the Idaho and Florida legislative staffs. He was instrumental in drafting Florida's environmental education legislation.

RESOURCE MATERIALS AVAILABLE:

Guide to Idaho Archeology
Idaho State Museum
Available from Mr. Richard Kay
State Office Building
Boise, Idaho 83707

Guide to Idaho Earth Science

Guide to Caves & Caving
State Bureau of Mines & Geology
University of Moscow

State Water Resources Book
State Office Building
Boise, Idaho 83707

MONTANA

STATE E.E. CONTACT:

Mr. Ed Eschler
Assistant Director of Basic Skills
Office of Public Instruction
State Capitol Building
Helena, Montana 59601
(406) 449-3653

STATE PLAN ACTIVITIES:

A tentative draft is being formulated.

ENVIRONMENTAL EDUCATION PROGRAMS FUNDED FOR 1972:

Francis Mitchell
Falls Creek Environmental Education Foundation
Rt. 6, East Rattlesnake
Missoula, Montana 59801

This program will develop a curriculum for the elementary level.

Martha Anne Dow
American Association of University Women
3023 Stinson Avenue
Billings, Montana 59501

The A.A.U.W. will develop a curriculum for a rural community.

Torlief Aasheim
Montana State University
Cooperative Extension Service
Bozeman, Montana 59715

The program will develop a curriculum for the public in an 18 county rural area.

SCHOOL PROGRAMS & ACTIVITIES:

Edward A. Heiser
Coordinator, E.E. Activities
Billings Public Schools, District 2
Billings, Montana 59102

This program has been in operation since 1967 with cooperation exerted

by a variety of individuals, institutions, and agencies. It approaches environmental education on an interdisciplinary basis, and illustrates a balance between classroom instruction and on-site outdoor experiences.

UNIVERSITY & COLLEGE PROGRAMS & ACTIVITIES:

Dr. Wendell A. Mordy, Director
Environment & Resource Analysis Center
University of Montana
Missoula, Montana 59801
(406) 243-2212

The Center conducts analyses of the world environment and resource problems related to world political problems and the quality of life. It involves both faculty members and students in interdisciplinary efforts to solve the problems of the human environment.

Eastern Montana College

Eastern Montana College in conjunction with School District #2, Billings, has cooperatively developed an outstanding E.E. program over the past 6 years. The program is a 1972 Distinguished Achievement Award finalist in an awards competition sponsored by the American Association of Colleges for Teacher Education. It is a multi-faceted project including in-service teachers workshops, counsellor training workshops, and backup instructor programs for the Camp, the latter two involving upper-division college students at Eastern Montana College. Other aspects have been the community involvement with the Yellowstone Medical Society, the local PTA chapters furnishing the financial backing for the program, and the development by the college faculty of pre-camp, camp, and post-camp activity-centered inquiry environmental teaching units. The School District is now taking over active management of the program, and the College is continuing its training functions.

GROUPS & AGENCIES WITH INTEREST IN E.E.:

Rocky Mountain Environmental Field Center
Regional Director: William Hindle
1838 Hawthorne
Detroit 48236

Located in the mountain wilderness of the Blackfeet Tribe on the eastern slope of the Rockies, 15 miles south of the East Glacier Park, Montana. Educational programs are held there including environmental studies.

Ecotrek
William C. Leitch, Trustee
400 North Avenue, East
Missoula, Montana 59801
(406) 549-5469

Ecotrek endeavors to amelicrate the environmental crisis by helping students develop ecological awareness as well as a strong sense of social responsibility through teaching the basic principles of ecology, heightening perceptive abilities, critically examining modern America's attitude toward nature, and encouraging participation in hometown problems.

Western Montana Scientists' Committee for Public Information
1650 Madeline Avenue
Missoula, Montana 59801

One of SIPI's affiliated science information committees.

State Board of Health and Air Pollution Control Advisory Council
Cogswell Building
Helena, Montana 59601

Montana Association of Conservation Districts (MACD)
c/o P.O. Box 2663
Great Falls, Montana 59403
Coordinator of Public Information/Communication: Ray Fenton
(406) 453-4495

Montana Wildlife Federation

Montana Conservation Council

Montana Environmental Protection Council

Montana Department of Natural Resources

American Association of University Women, Montana Division
3023 Stinson Avenue
Billings, Montana 59102

This division has been actively engaged in environmental studies, legislation, and action projects on a state level for 4 years.

Vincent Yannone
Fish and Game Department
Mitchell Building
Helana, Montana 59601

Resources Agency -- Activities and Responsibilities

The Fish and Game Department, through its Information and Education Division, is responsible for making the public aware of the Department's management policies through the employment of a task force of Gun Safety Men and Youth Educators who visit school districts statewide and present talks on conservation.

Montana Comprehensive Health Planning
Montana State Department of Health
Helena, Montana 59601
CHP Director: Robert Johnson
(406) 449-3121

RESOURCE MATERIALS AVAILABLE:

Study of Environmental Education
Potentials of Montana Public Lands

by Bureau of Land Management, E.E. Team, summer, 1971.

Environmental Education
by Ed Heiser, Coordinator, E.E. Activities, Billings School District 2.
EE: History & Importance
Curriculum
Administration
Guides for Establishing an EE Program

This publication is a "resume of an experimental program in E.E. carried out for the past 5 years as a pilot program of the Montana College Lab School in conjunction with Eastern Montana College and the Billings School District #2."

POSSIBLE RESOURCE PEOPLE:

Charles C. Bradley
Coordinator, Environmental Studies Center
Montana State University
Bozeman, Montana

Dorothy Bradley
Environmental Task Force
S.U.B. Montana State University
Bozeman, Montana

James Brown, Executive Director
Action for Eastern Montana
P.O. Box 502
Glendive, Montana

Norman Jacobson
Science Department Head
Hellgate High School
Missoula, Montana

Dr. Roy White
Professor of Environmental Education
University of Montana
Missoula, Montana 59801
(406) 243-5054

Tom Warren
Montana Fish & Game Photographer
Helena, Montana

Todd Schlapfer
Falls Creek Project
Condon, Montana

David Wedum
Education Representative
Montana Fish & Game Department
Helena, Montana

Dan Sweeny
Curriculum Director
Butte Public Schools
Butte, Montana

Calvin Ryder
Director, Conservation Project
Great Falls Public Schools
Great Falls, Montana

Robert S. Morgan
Helena, Montana

A government award was presented to him by the Rocky Mountain Center for Environment. He is supervisor of the Helena National Forest and has worked long and hard to protect the Helean Forest from clearcutting and invasion by motorized vehicles. He has been active in seeking wilderness classification for Forest Service lands and has assisted citizen efforts to get better resource management and land use on federal lands.

Lloyd D. Mickelson
Member of NEA Task Force on E.E.
High School English teacher
Billings, Montana

Conservation Education Association
Special Services Coordinator
Dr. Wilson F. Clark
Eastern Montana College
Billings, Montana 59101

Harold Knapp
Conservation Project Director
Missoula County High School
Missoula, Montana

Robert Carroll
Film Project Leader
Montana Fish & Game Department
Helena, Montana

Donald King
Elementary Principal
Alberton, Montana

Miss Marjorie Hartmann, Principal
Anna Jeffries School
Cut Bank, Montana

Geoffrey Foote & Kathie Foote
Falls Creek Project
Condon, Montana

Roger Fliger
District Information Officer
Montana Fish & Game Department
Great Falls, Montana

Professor Erick Erickson
Director of Eastern Montana College Lab School
Eastern Montana College
Billings, Montana

George Darrow
Billings, Montana

Received the Hilliard Memorial Award from the Rocky Mountain Center for Environment for his key role in the passage of the Montana Environmental Policy Act. A member of the State House of Representatives, now serves as head of the Environmental Quality Council which was established by the Act.

Richard Chapman
Assistant Professor, Political Science
University of Montana
Missoula, Montana 59801

On the Environmental Standards Steering Committee

Thomas Birch
Assistant Professor, Philosophy
University of Montana
Missoula, Montana 59801

Wayne Milstead, Associate Professor
Biology & Head of Biological Sciences Department
Eastern Montana College
Billings, Montana

James Jezeski
Coordinator, Center for Environmental Studies
Montana State University

Martha Anne Dow
Instructor, Biology Department
Northern Montana College

Coordinates state environmental A.A.U.W. projects

Thomas Michael Power
Lecturer, Economics
University of Montana
Missoula, Montana 59801

Dr. C. Everett Pitt
Associate Professor of Biology & Science Education
Northern Montana College

Dean Louis Hagener
Chairman, Biology Department
Northern Montana College

Thomas Kennedy
Assistant Professor of Education
Eastern Montana College

William Craig Leitch
Teaching Assistant
University of Montana
Missoula, Montana 59801

NEVADA

STATE E.E. CONTACT:

Mr. Jack O'Leary
Science Consultant
Department of Education
Heros Memorial Building
Carson City, Nevada
(902) 882-7325

Glen Griffith
Fish and Game Department
1000 Raleigh Road
Reno, Nevada 89507

Dr. John H. Trent
Associate Professor
College of Education
University of Nevada
Reno, Nevada 89507
(702) 784-6637

The State Department of Education Consultant in Environmental Education provides leadership for the program through the development and distribution of instructional materials, organizing teacher inservice training programs, efforts of public and private educational agencies concerned with environmental education.

STATE PLAN ACTIVITIES:

A State Plan was submitted to OEE for funding in 1972 but was rejected. Mr. O'Leary hopes to implement the plan with other funds.

LEGISLATION:

The Legislature passed legislation at the 1971 Session creating a Nevada Advisory Committee for E.E. Prime functions of the committee:
1. To promote leadership in development of the E.E. curriculum.
2. To coordinate and evaluate existing programs now being used in the public schools of the state. But the Legislature did not fund the legislation. The Advisory Committee is mandated by statute to meet at least four times each year without any appropriated funds. The Nevada State Department of Education has been able to finance three meetings of the Committee to date. It is doubted that they will be able to afford more. The Nevada State Board of Education submitted a proposal in 1972 for a State Evaluation and Dissemination project. Funds would

allow the full operation of the Advisory Committee and add an E.E. consultant to the Nevada State Department of Education staff. The State Board of Education has established as one of its legislative priorities, the full funding of the Committee and the consultant's position.

Senate Bill 350, 1971: (approved April 26, 1971) created an advisory committee on environmental education. It requires the State Department of Education to coordinate and develop an environmental education program and to appoint an Environmental Education Consultant. Provides for instruction in ecology in the public schools and the university. Provides for outdoor education, teacher training, and certification in environmental education.

E.E. PROGRAMS FUNDED FOR 1972:

Foresta Institute for Ocean and Mountain Studies
Route 1
Box 620
Carson City, Nevada 89701
Director, Dr. Richard G. Miller
(702) 882-6361, or 882-1728

Students, teachers, administrators, and Foresta Faculty come from all over the world to share the learning and teaching experience at the Institute.

SCHOOL PROGRAMS AND ACTIVITIES:

Sixth Grade Clean Sweep
Douglas Gordon
Churchill County School District
Fallon, Nevada

Gilbert School Environmental Education
Dr. Les Burgurardt
C. T. Gilbert Elementary School
Las Vegas, Nevada

Environment Class for non-science oriented students
Bill Campbell
Hug Hugh School
Reno, Nevada

Environment/Conservation Problems
Bill Campbell
Hug High School
Reno, Nevada

Washoe County Outdoor Education Center (ESEA Title III)
Brian Wise
Washoe County Schools
Reno, Nevada

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

A new major-minor in Environmental Science is being set up at the University of Nevada which should soon be approved by the Department of Education. The university will try to set up without additional funds the program which will include physical and biological science courses, practical courses like those from the Department of Renewable Resources, possible engineering courses, and a multidisciplinary team-target course entitled "Methods of Teaching Environmental Science."

The University of Nevada, Reno, is presently working to establish teaching majors and minors in environmental science. It is hoped that these will soon be approved by the State Department of Education.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Bureau of Environmental Health
Nye Building
201 South Fall Street
Carson City, Nevada 89701

State Commission of Environmental Protection
Nye Building
201 South Fall Street
Carson City, Nevada 89701

Ecology Club
Bernadean University
3501-3599 Thom Blvd.
Las Vegas, Nevada

Nevada Open Spaces Council
President; Mary Kozlowski
709 Mallard South
Las Vegas, Nevada 89107
(702) 878-6588

In 1970 prior to the elections of 1970, the Council through legislative workshops given on their own, was able to draft model water and air legislation which bills were passed substantially as drafted.

Churchill County Environmental Awareness Advisory Council

Washoe County Environmental Education Advisory Council

Nevada Advisory Committee for Environmental Education
Chairman: Richard Gordon Miller

Submitted state plan for FY 72 funding through the State Department of Education.

Nevada Environmental Education Council
Organization for Information Dissemination
Bill Campbell, President
Hugh High School
Reno, Nevada

Nevada Outdoor Recreation Association

A loosely knit group of conservationists throughout the state.

RESOURCE MATERIALS AVAILABLE:

"Preserving Nevada's Environmental Heritage"
Department of Education

The final report - Governor's Natural Resources Council, November 1970.

POSSIBLE RESOURCE PEOPLE:

Richard Miller, Director
Foresta Institute for Ocean and Mountain Studies
621 Frantown Road
Rt. 1, Box 621
Carson City, Nevada 89701
(702) 882-6361

Mr. Conkey is Designer of the Ecological Parameter Overlay system of land appraisal science. Author of textbook, Living Things and Their Environment, developed and now directs Foresta's Summer Science Training Program in Field Ecology. Presently serves on Board of Supervisors of the Tahoe, Verdi Soil Conservation District. Elected to Board of Trustees of the North Shore Property Owners Association, an organization dedicated to the prevention of unrestricted development which is threatening the environmental capacity of the Tahoe basin.

John Trent
Professor of Science Education
University of Nevada
Reno, Nevada 89507
(702) 784-6637

Lewis Polizzi, Vice-Principal
Dilworth Jr. High School

Has taught environmental oriented courses.

Michael Pontrelli
Professor, Department of Biology
University of Nevada
Reno, Nevada 89507

Specializes in wildlife biology and population ecology.

John W. James
Chairman, Division of Environmental Sciences
Tahoe College

James Van Allen Conkey
Associate Director
Foresta Institute
621 Frantown Road
Rt. 1, Box 621
Carson City , Nevada 89701

NORTH DAKOTA

STATE E.E. CONTACT:

Mr. George Fors
Science and Mathematics Consultant
Department of Public Instruction
State Capitol Building
Bismark, North Dakota 58501
(701) 224-2275

STATE PLAN ACTIVITIES:

The Department of Public Instruction has developed for the schools of North Dakota, Activities for Environmental Education.

The North Dakota Science and Mathematics Newsletter which is sent out each month during the school year contains information on environmental education.

E.E. PROGRAMS FUNDED FOR 1972:

Dennis Huber
United Tribes of North Dakota Development Corporation
Box 139, 420 N. 4th Street
Bismark, North Dakota 58501

This program will develop an Indian-oriented curriculum materials for use in Indian schools, grades K-12.

David Walsh
Fargo-Moorehead Chapter
Zero Population Growth
Box 2691
Fargo, North Dakota 58102

This program will develop a process for disseminating to rural communities media materials dealing with the relationship between population and the environment.

SCHOOL PROGRAMS AND ACTIVITIES:

Division of Natural Sciences Ecology Committee
North Dakota State University

Bismark Public School District No. 1
400 Avenue E
Bismark, North Dakota 58501
Russell Hersrud

Mr. Hersrud is very involved with environmental organizations across the country.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Action Committee for Environmental Education
Dale Henegar, President
2421 Avenue C East
Bismark , North Dakota 58501

This group has been active for about six years.

Environmental Education Center
Norman Pedersen, Coordinator
University of North Dakota
(701) 777-2661

North Dakota Ecological Studies Institute
University of North Dakota
409 Hamline
Grand Forks, North Dakota 58201
Chairman: Paul Kannowski

United Tribes of North Dakota Development Corporation
Johnson O'Malley Program
Suite 317, 420 N. 4th Street
Bismark, North Dakota 58501
(701) 223-9395

They have an American Indian Curriculum Development Program underway.

Wildlife Federation
H. R. Morgan
1005 W. Sweet Avenue
Bismark, North Dakota 58501

POSSIBLE RESOURCE PEOPLE:

Donald Scoby
Professor of Botany
North Dakota State University
1301 12th Ave North
Fargo, North Dakota 58102
(701) 237-8646

Research interests include environmental programs and land use ecology planning.

John Coles
Vice President, Jamestown National Bank
Chairman, North Dakota Bankers Association Environmental Committee
1524 5th Avenue N.E.
Jamestown, North Dakota 58401

Lewis and Clark Environmental Association
President, Jan Van Swearingen

Russell Hersrud
Bismark Public School District No. 1
400 Avenue E
Bismark, North Dakota 58501

He is very active with environmental organizations.

Dr. William T. Bowker
Assistant Professor of Botany
North Dakota State University
Fargo, North Dakota 58102
(701) 237-7222

Norman Pedersen
Coordinator, Environmental Education Center
University of North Dakota
Grand Forks, North Dakota 58201

OREGON

STATE DEPARTMENT OF EDUCATION CONTACT:

Bus Nance
State Department of Education
942 Lancaster Drive, Northeast
Salem, Oregon 97310

STATE PLAN PROGRESS:

The Oregon Plan involves a clearinghouse for students, groups and citizens with curriculum, teacher education, dissemination information, and a curriculum plan for students.

LEGISLATION:

The legislature has earmarked one percent of the state's gasoline tax revenue (about $1 million per year) for bicycling trails and lands.

ENVIRONMENTAL EDUCATION FUNDED PROGRAMS FOR 1972:

Donald Stotler
Portland State University
Environmental Education Center
Box 751
Portland, Oregon 97207
The program will develop Environmental Education programs in both formal and non-formal education institutions.

Lawrence Williams
The Oregon Environmental Council, Inc.
4315 West Corbett
Portland, Oregon 97201
The Council will develop a switchboard to coordinate local environmental education activities and disseminate environmental information.

Robert Sesar
School District #1
Multnomah County
631 Northeast Clackamas Street
Portland, Oregon 97208
The program will develop of a manual on the use of the outdoor environment as an educational resource for undergraduate students.

Tim Ash
School District #1
Multnomah County
631 Northeast Clackamas Street
Portland, Oregon 97208
This will be a demonstration of an outdoor activity oriented curriculum process for secondary schools.

SCHOOL ACTIVITIES:

Outdoor School
Mr. Arthur Krisz
Milwaukie School District
Box 22047
Milwaukie, Oregon 97222

"Integrating Conservation Education Into The Total School Curriculum"
Mr. Max L. Brunton, Administration Assistant
Parkrose Public Schools
10636 Northeast Prescott
Portland, Oregon 97220

Catch
A community-school environmental program. It centers on a student constructed ecology project located on Larch Mountain. As a federally funded project they have available slides, presentations, and materials on ecology conservation, waste disposal, and a host of related topics.
Marysville School
7733 Southeast Raymond
Portland, Oregon 97206
777-1769

Outdoor School
Mr. Warren Gillfillan
Multnomah County Intermediate Education District
Portland, Oregon

Resident outdoor school for sixth grade students.

Outdoor Education
Mr. Ray Maag
Washington County Intermediate Education District
172 S. 1st Avenue
Hillsboro, Oregon 97123

Primarily a resident outdoor school for sixth graders.

COLLEGES AND UNIVERSITIES

Oregon State University Environmental Health Sciences Center
Corvallis, Oregon 97331
Also: Oregon State University Cooperative Extension Service
(the extension service is able to provide information on the technical aspects of environmental problems0

Mr. Edward McConnaughey
c/o Dr. Paul Rudy
Director-Institute of Marine Biology
University of Oregon
Eugene, Oregon 97403
An Integrated Land and Water Use Plan for the Coos Bay Estuary

Mr. J. Peterson Myers
c/o Dr. Jeffrey Kelly
Department of Chemistry
Reed College
Portland, Oregon 97202
Political, Sociological, Economic, and Biological Considerations Affecting a Predator Control Program in the Steens Mountains of Eastern Oregon

Environmental Education Center
Donald W. Stotler, Director
318 Old Main
Portland State University
Portland, Oregon 97207
The Center is an experiment in tri-county activation, interaction and cooperation. The counties involved: Clackamas, Multnomah, and Washington.

Linfield College
McMinnville, Oregon 97129
They have an "Environment/Ecology Norm State Requirement for Integrated Science" and a B.A. in Environmental Studies.

Lane Community College
Eugene, Oregon 97405
During the academic year 1969-70, Lane Community College initiated development of its Environmental Technology technicial-training program. The program was amplified for the 1970-71 academic year and placed as of the 1971-72 academic year, in the Science Department of Lane Community College. In addition, evening classes involving

concerned citizen participation were inaugurated by the Adult Education program of Lane Community College. This and future expansion of the Environmental Technology program is in response to demands from both private and the business sector of the college district. Present expectations are for a growth of 30% per year for graduates of the Lane Community College training program for at least the next five years. The present Lane Community College program offers training in the technologies of water quality.

Department of Architecture and Landscape Architecture
Oregon State University
Corvallis, Oregon 97331
This Department has been consolidated into a single administrative unit on the School of Humanities and Social Sciences. It has been charged with the task of giving a review to the needs of the State of Oregon and the Pacific Northwest in the broad areas of Environmental Design education.
Other facilities at Oregon State University, Corvallis: Environmental Health Sciences Center, Air Resources Center, Marine Science Center.

Environmental Studies Center
University of Oregon
Eugene, Oregon
An academic office of the University has set up an information and retrieval center.

Survival Center (Associated Students of the University of Oregon)
University of Oregon
Eugene, Oregon
The Center has participated in the training of university students as resource personnel.

Environmental Education Center
Room 373, Lincoln Hall
Portland State University
Designed as a self-learning facility where prople come to participate and to learn, It is sponsored by Portland State University, the Portland Public Schools and three intermediate education districts. Dr. Donald Stotler, Director of Environmental Education Center, has published a book, "The Self-Learning Society" which proposes establishing centers such as the one in Portland and in cities throughout the country. School age children and adults, persons concerned about the environment; local government officials, business and industry personnel are welcome to use the center. It houses environmental education material and a file of federal, state, and local environmental agencies for referrals. It will also act as a consultant in developing environmental proposals.

Community Arts Study Program
University of Oregon
Coordinator: Dr. Kensler
Program has provided services to a number of Oregon communities for the past four years, stimulating awareness of aesthetic and environmental blight, and proposing constructive grass-roots programs involving entire communities.

GROUPS AND ORGANIZATIONS INTERESTED IN E.E.

Preserve Our Urban and Rural Environment
William G. Ellis, President
Suite 1
409 East Greenwood Avenue
Bend, Oregon 97701
(503) 382-2811
PURE is a citizens' group dedicated to keeping Central Oregon's air clear, its lands clean, and its water pure. Members endeavor to educate the general public in ecological and conservation matters.

Mount Hood Conservation Society
P.O. Box 110
Zig Zag, Oregon 97073

Environmental Study Center
University of Oregon
Eugene, Oregon
Director: Stanton Cook

Marine Science Center
Oregon State University
Newport, Oregon

Environmental Education Center
373 Lincoln Hall
Portland State University
Portland, Oregon
In 1971 they had a self-learning display, "Can You Have a Human City?" (co-sponsored by Portland Public Schools, Tri-City Intermediate Education Districts)

Department of Environmental Quality
1400 Southwest Fifth Street
Portland, Oregon 97201

Living Earth
2806 Northeast 11th
Portland, Oregon 97212

Environment Committee
Newport Chamber of Commerce
Newport, Oregon
Chairman: Ron Phillips

Willamette River Greenway Association
Robert Mention, President
P.O. Box 02034
Portland, Oregon 97207
The Association was established in order to promote and implement a comprehensive plan for the preservation, public access, use, and permanent recreation enjoyment of the Willamette River and its tributaries, and also to urge citizen awareness and involvement in matters directly relating to the Willamette River and its immediate environment.

Ecology - Outdoor Education
Advisory Committee for Malheur County
Chairman: Rob Awier

Citizens for a Clean Environment
Chairman, Board of Directors
P.O. Box 255
Corvallis, Oregon 97330
Citizens for a Clean Environment was created in order to alert, represent, and serve residents of the Willamette Valley whose wellbeing is jeopardized by pollution of the environment. It seeks to perpetuate Oregon's pleasant environment by collection, analysis, and dissemination of factual information to the public as well as by persuasive political or legal action. The organization publishes occasional reports and public opinion polls as well as publicizes candidates views on environmental issues in local campaigns.

Eco-Alliance
Tom Pearson, Chairman
349 Waldo Hall
Oregon State University
Corvallis, Oregon 97330
(503) 754-1459
Eco-Alliance attempts to provide a forum at which the relationships of man and his environment may be considered. It promotes an interdisciplinary approach to education, problem solution, and view of the environment. Members endeavor to inform as many persons as possible about national and local environmental problems.

Oregon Museum of Science and Industry
4015 Southwest Canyon Road
Portland, Oregon 97221
Director of Education: Raymond Barrett

Oregon Environmental Council
Lawrence F. Williams
Executive Director
4315 S.W. Corbett
Portland, Oregon 97201
(503) 222-5369 or 229-5696
The Sierra Club gave money to them to support a course on Wilderness at the University of Oregon. The Council was established in order to join concerned citizens to create a more effective voice through cooperative effort and to increase understanding and awareness of the impact of modern society upon his environment. Members urge citizen, legislative, and administrative action toward the protection and restoration of our natural historic heritage and the creation of communities which reflect these values through creative planning, education, and wise stewardship.

MATERIAL AVAILABLE IN STATE:

CATCH Newsletter
Marysville School
7733 Southeast Raymond
Portland, Oregon 97206
Comes out monthly - put out by the community-school environmental program known as CATCH.

Conservation Education Officer
U.S. Forest Service
P.O. Box 3623
Portland, Oregon 97208
Write here for additional information on conservation and outdoor education programs.

POSSIBLE RESOURCE PEOPLE

Dr. Alfred J. Kreft
National Director
Izaak Walton League of America
1301 Portland Medical Center
Portland, Oregon 97205
(503) 227-6566 or (503) 227-1818

Member of National Advisory Council on Environmental Education. Physician with active interest in conservation organizations since 1948. He has received numerous awards from conservation type organizations for his efforts in that field.

James T. Krygier
Coordinator of Forestry Extension
Oregon State University

Arthur Stevens
Portland Community College
Portland, Oregon

Tom Tanner
Crescent Valley High
4444 Northwest Highland
Corvallis, Oregon 97330

Dr. Edward Heath, Head
Department of Recreation
Oregon State University
Corvallis, Oregon 97331

Dr. Kensler
Community Arts Study Program
University of Oregon

Helen Wahlstrom
Milwaukie Public Schools
P.O. Box 22047
Milwaukie, Oregon 97222

Ernie McDonald
Pacific Northwest Regional Office
U.S. Forest Service
P.O. Box 3623
Portland, Oregon 97208
Has done work with teacher workshops.

Joe Bennett
Georgia Pacific

John Ferguson
Occupational Skills Center

Barbara Fox
Clackamas County I. E. D.

Gordon Galbraith
Oregon Board of Education

Russ Graham
Weyerhaeuser

Rodger Curanek
West Linn School District

Larry Williams
Oregon Environmental Council

Rod Hornish
Georgia Pacific

Rae Johnson
Retired - Georgia Pacific

Orin Kidd
Ripple Creek Ranger Station

Curt Lowery
Oregon Board of Education

Mike Miller
Green Thumb Project

Larry Minard
West Linn School District

Vern Schench
Georgia Pacific

Jim Wagner
Mt. Hood Community College

George Whittier
Western Wood Products

Ed Wood
Wood Nursery
Aurora, Oregon

Ronald Kaiser
Clackamas Community College

Harold Black
Clackamas County Extension

George Churchill
Willamette Greenway

Roger Martin
Clackamas County State Representative

John McLean
Mayor
Lake Oswego, Oregon

Bob Gustafson
Bureau of Parks
Portland, Oregon

Cliff Hamilton
Oregon State Game Commission

Robert Hostetter
Bureau of Land Management

Nick M. Mariana
Bureau of Sport Fisheries and Wildlife

Mrs. Borden Beck
Friends of Tryon Creek Park

Henry Pavalek
Assistant State Conservationist

Rhonda Landels
Audubon Society

Ernest L. Kolbe
Western Forestry Center

Ray Haag
Washington County Intermediate Education District

SOUTH DAKOTA

STATE E.E. CONTACT:

Robert Miller
Social Studies Environmental Consultant
Department of Public Instruction
State Capitol Building
Pierre, South Dakota 57501
(605) 224-3315

Morris Anderson
Box 250
Pierre, South Dakota 57501

STATE PLAN ACTIVITIES:

The state plan is completed and is in the process of implementation which began in 1971. Only minor changes will occur from now on. The state plan was funded by EPDA. Includes interdisciplinary approach. There are currently ten regional workshops working around the state.

E.E. PROGRAMS FUNDED FOR 1972:

Development of a process curriculum for community leaders in a Model Rural Development District.

J. O. Young, Director
South Dakota State University
Brookings, South Dakota 57006

GROUPS AND AGENCIES WITH INTEREST IN E.E.

Institute of Atmospheric Sciences

Richard A. Schleusener, Director
South Dakota School of Mines and Technology
Rapid City, South Dakota 57701
(605) 392-2291

The mission of the Institute is to conduct research in the atmospheric sciences, with particular emphasis on weather modification. Current research is directed toward an understanding of cloud physical processes, including studies of intentional and unintentional weather modification.

Circle K's Environmental Action Group (EAG)
Box 1648
Northern State College
Aberdeen, South Dakota 57401

Interlakes Environmental and Outdoor Education. Chester Area Schools, No. 34, Chester, South Dakota 57016. Director: Major L. Boddicker (605) 489-4991. This program trains elementary teachers to use a curriculum in environmental and outdoor education adapted or designed by the project. The teachers with help and equipment from the project, conduct in-field studies of the environment with their students. In this way, the teachers can learn with the children about the delicate interrelationships in nature and man's place in these interrelationships.

Lake County Schools. The elementary schools of Lake County have been involved in an E.E. program.

Black Hills Environmental Foundation
P.O. Box 1692
Rapid City, South Dakota 57701
President: Dick Rebbeck (outdoor and agriculture editor, Rapid City Journal)

A nonprofit, incorporated citizen's group for the "purposes of conducting educational and research programs relating residents and visitors of the Black Hills region to their environment." The Foundation and its projects are included in the plan of action for Black Hills Area Resource Conservation and Development Project. Through this Resource Conservation and Development program, the Foundation has received technical support from the Soil Conservation Service and other government agencies. Foundation activities to date have concentrated on planning for establishment of a conservation study center, particularly at Victoria Lake, and participation in sponsoring and conducting an air quality workshop under an Environmental Protection Agency grant.

Learning Center
Manderson, South Dakota 57756

The Learning Center was initiated in the Fall of 1970 by the local Indian school board "to supplement and invigorate the relationship of the community to the school and the natural and socio-historical environment of the area. It was felt that means must be found to preserve and pass on the unique and valuable traditional Dakota ways of viewing and dealing with the environment, as well as improving the learning of modern science and ecology."

State Department of Health
Office Building Number Two
Pierre, South Dakota 57501

South Dakota State Conservation Commission
Howard Geere, Executive Secretary

Governor's Council for E.E.
Maurice Anderson, Chairman

RESOURCE MATERIALS AVAILABLE:

Available from: Interlakes Enviromnental and Outdoor Education Program, Chester, South Dakota

"Things in Ice and Snow"
"Winter Foods and Movements of Small Mammals"
"Let's Study Litter"
"Clues to Life in the Snow"
"Studying Parts of an Insect"
"Adaptations of Plants to Their Environment"
"Experimental Units in Mathematics Using the Outdoor Classroom"
"Texture of Natural Objects"
"Mapping and Grids"
"Making Snowdrifts"
"Bird Nests and Bird Populations on a Prairie Slough Area"
"What lives in a Shelterbelt?"
"Studying and Estimating Insect Population - One Acre"
"Adventures in Weather"

POSSIBLE RESOURCE PEOPLE:

Richard Sagness
Chairman, Science Department of Curriculum Instruction
University of South Dakota

Also a member of the State Council for E.E. which wrote the state plan for South Dakota. Coordinated the inservice component of project submitted in 1972 from Sioux Falls.

Robert Miller
Department of Public Instruction
State Capitol Building
Pierre, South Dakota 57581
(605) 224-3315

Chairman, State Planning Committee for E.E.; also state E.E. coordinator in Department of Public Instruction.

Edith Lewinnek
Demonstration School
Douglas School System
Ellsworth Air Force Base
South Dakota 57706

Arthur K. Shaver, Project Director
Federal Programs Coordinator
Instructional Planning Center
201 E. 38th. Street
Sioux Falls, South Dakota 57102

Working with Sioux Falls district in establishing a strong inservice training program.

Morris Anderson
Federal Fish and Wildlife
Box 250
Pierre, South Dakota 57501
(605) 224-8692

Major L. Boddicker
Environmental Education Director
Interlakes Environmental and Outdoor Education Program
Chester, South Dakota 57016

He is the E.E. Director, Chester Area Schools, Chester, South Dakota. He has written some curriculum materials (along outdoor education lines).

Earl Chance
Rapid City
South Dakota 57701

Naturalist, and treasurer, Black Hills Environmental Foundation

Ralph McLaughlin
Rapid City, South Dakota 57701

Coordinator of E.E., Rapid City Independent School District #1.

James Simpson
Chester, South Dakota 57016
(605) 489-2416

Mathematics and Social Studies Curriculum Consultant to the Interlakes Environmental and Outdoor Education Program.

Jerry A. Larsen
Assistant Director
Interlakes Environmental and Outdoor Education Program
Chester, South Dakota 57016
(605) 489-2416

He has written some curriculum materials along outdoor education lines.

Larry Wright
Assistant Superintendent of Instructional Services
State Capitol Building
Pierre, South Dakota 57501
(605) 224-3315

Francis Murphy

A supervisor of the West Pennington Conservation District and Vice President of the South Dakota Association of Conservation Districts.

Norman Nelson

President, Black Hills group of the Sierra Club, and biology teacher in the Douglas School System.

John Donnan

Former secondary and high school science teacher, chemist and research meteorologist. For three years he conducted a nature school for elementary students.

UTAH

STATE E.E. CONTACT:

Mr. R. LaMar Allred
Specialist, Science and Environmental Education
Division of General Education
State Board of Education
1400 University Club Building
136 E. South Temple St.
Salt Lake City, Utah 84111
(801) 383-5431

Dr. Cyrus McKell
Environment and Man
Utah State University
Logan, Utah
(801) 752-4100 Ext 7266

STATE PLAN ACTIVITIES:

A proposal for developing one was submitted but not funded.

Utah State Board of Education
1400 University Club Building
136 East South Temple
Salt Lake City, Utah 84111
LaMar Allred, Chairman, Utah Environmental Education Committee

Co-sponsoring agencies:

College of Education
Utah State University
Logan, Utah 84321

Environment and Man Program
Utah State University
Logan, Utah 84321
Director, Cyrus McKell

OUTSTANDING E.E. PROGRAMS 1973-74:

Jordan River Program
Glen Soulier
Jordan School District
9361 South 400 East
Sandy, Utah 84070

Clear Creek Summer Camp
Row Zwahlen and Raymond Rachele
Carbon School District
50 E. 4th North
Price, Utah 84501

Mill Hollow Environmental Center
James G. Lawrence, Director
Granite School District
340 East 3545 South
Salt Lake City, Utah 84115

A School Site Environmental Study Area
Mrs. Louise Hetzel, Director
Helen M. Knight School
168 W. 400 North
Moab, Utah 84532

Blue Mountain Environment Science School
San Juan School District
P. O. Box 218
207 N. 1st East
Monticello, Utah 84535

Hidden Haven - E.E. Outdoor Classroom
Chester Benson, Director
Parowan School
Parowan, Utah 84761

Environmental Education for All Seasons
Lyle R. Tregaskis
Alpine School District
50 N. Center Street
American Fork, Utah 84003

Outdoor Summer Busing Program
Superintendent, C. Bryce Draper
Cache School District
2063 N. 12th East
Logan, Utah 84321

Summer Outdoor Environmental Camp
Director, Monroe G. Gallier
Maeser School
150 S. 5th East
Provo, Utah 84601

Environmental Research Center
Clearfield High School
Davis County School District
Farmington, Utah 84025

In the spring of 1971 the ecosystem oriented activities at Clearfield High School had gained such interest that another classroom was obtained. Since that time this space has evolved into an Environmental Research Center, partially equipped in an attempt for students to stay abreast with the eco-movement. Seven students started the center that now has individual work areas for 30 students. Davis County School District has supplied some basic equipment. As many as 100 students a day now use the center. At least 30 target area (minority) students are now using the center.

Special State Funding Programs Extended school year funds are widely used to support environmental education programs. Some "leadership" funds are available to competent educators involved in environmental programs.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Ecology Center
John M. Neuhold, Director
Utah State University
Logan, Utah 84321
(801) 742-4100, Ext 210

The Ecology Center was created as part of a University-wide effort to coordinate and direct activities in ecological research, education, and service. The Center includes faculty members as well as graduate students who participate together in projects and experimental programs in these areas.

Center for Environmental Studies
Brigham Young University
Provo, Utah 84601
Contact: Dr. Spencer Condie

Center for Pollution Research
Utah State University
Logan, Utah 84321
(801) 752-4100

The Center was established in order to coordinate and facilitate University-wide research and graduate training in pollution causes and abatement. It has a Director as well as an Advisory Committee of administrators of the University Divisions with the major pollution research programs.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

State-Level Advisory Committee. The Utah State Environmental Education Advisory Committee is composed of ten members apparently selected by the State School Office upon recommendation of the co-chairman of the State Office E.E. Committee. Selection is made on the basis of the individual's interest and philosophy toward environmental education. At present, meetings are held on a bi-monthly basis.

State Division of Health
44 Medical Drive
Salt Lake City, Utah 84113

State Department of Natural Resoruces
225 State Capitol
Salt Lake City, Utah 84114

The State School Office has an E.E. Committee representative of several curricula areas plus guidance and evaluation and teacher education programs. This Committee functions under the guidance of the objectives established by the State Board's Committee on E.E.

The Utah Division of Wildlife Resources through their Chief, Information and Education, supplies the public with information about the Division's stewardship for managing the wildlife resources. The supplying of such information to education is a secondary consideration at present. Identifiable trends indicate that the division will become more involved with E.E.

Delworth Garden (economic, resource use)
Utah State University
Logan, Utah
(801) 752-4100 Ext 7306

RESOURCE MATERIALS AVAILABLE:

Department of Education
"Teacher's Guide to Environmental Education"

POSSIBLE RESOURCE PEOPLE:

Lois Cook (User of GEE materials)
Dilworth
1953 S. 21st E.
Salt Lake City Utah 84008

C. Garn Coombs (User of GEE materials)
Brigham Young University
112 McKay Building
Provo, Utah 84601

L. Ray Remund
Information Specialist
Information and Education Section
1596 West North Temple
Salt Lake City, Utah 84116

Lamont Jenson
Chairman, Science Department
Clearfield High School
Clearfield, Utah 84015

Mr. Richard H. Fuller
c/o Dr. Raymond L. Kerns, Jr.
Department of Geology
Utah State University
Logan, Utah 84321

He did a study "The Extent of Pollution and its Control in the Bear Lake Basin" and reported on it at the December 1971 meeting of the American Association for the Advancement of Science.

William Shaw (User of GEE materials)
Salt Lake City Board of Education
440 E. First South
Salt Lake City, Utah 84111

John E. Pace (User of GEE materials)
Edwards and Daniels and Associates
525 East Third South
Salt Lake City, Utah 84102

Mr. Clinton Kay Carter
c/o Dr. Kimball T. Harper
Department of Biology
University of Utah
Salt Lake City, Utah 84112

He did a study "Ecology of Antelope Island and Farmington Bay Area of Great Salt Lake" and reported on it at the December 1971 meeting of the American Association for the Advancement of Science.

Dr. Cyrus McKell
Environment and Man
Utah State University
Logan, Utah
(801) 752-4100 Ext 7266

WASHINGTON

STATE E.E. CONTACT:

Dave Kennedy
Supervisor of Environmental Education Programs
State Department of Education
Old Capitol Building
Olympia, Washington 98501
(206) 753-2574

Lloyd Rowley
Director
Cispus Environmental Center
Routs 4
Randle, Washington 98377
(206) 497-7131

Jim Garner
Science Consultant
State Department of Education
Old Capitol Building
Olympia, Washington 98501
(206) 753-6710

Tony Angell, Supervisor
Environmental Education Programs
Division of Curriculum and instruction
(206) 753-2574 (SPI)
(206) 676-3974 (HUXLEY COLLEGE)

Dr. Frank Brouillet
Superintendent of Public Instruction
Old Capitol Building
Olympia, Washington 98504

STATE PLAN ACTIVITIES:

According to Mr. Kennedy, plans are being made to revise and update the current state plan. It will include comprehensive goals, guidelines, an implementation model, strategies for funding, and evaluation as well as methods for community involvement in environmental education.

E.E. PROGRAMS FUNDED FOR 1972:

John Miles
Huxley College
Division of Western Washington State College
Bellingham, Washington 98225

This project will develop a college E.E. center devoted to inservice E.E. training activities and the dissemination of environmental curriculum materials.

Edmonds School District #15
3800 196th S.W.
Lynnwood, Washington 98036

The School district will develop curriculum materials for grades K-12 using a broadly based socio-ecological approach.

Norman V. Letson
South Central School District #406
4640 S. 144th
Seattle, Washington 98168

The program will develop a curriculum for the elementary level, using a school site and local community as an educational resource.

Mt. Vernon School District
Don Sundean
1219 East Division Street
Mt. Vernon, Washington 98273

Title III ESEA funding for curriculum development of learning activity packages.

Belleview School District
Jim Henning
310 - 102nd Avenue, N.E.
Bellevue, Washington 98004

ESEA Title III funding for Project USE. Urban-Suburban E.E.

Pacific Lutheran University
Robert Menzel
Tacoma, Washington 98447

Title I HEA funding for Community Involvement Teacher Training (Puget Sound Coalition).

Highline School District
253 South 152nd
Seattle, Washington 98148

Title III ESEA funding for Career Oriented E.E. Program K-12 Project Ecology.

KCTS TV, Channel 9
June Dilworth
University of Washington
Seattle, Washington 98105

Local funding for TV series on elementary E.E. - Best of All Worlds; People at Work; Working Together; Worlds in Balance.

CWSC & Cispus Environmental Center
Dr. Ken Hammond (CWSC)
Lloyd Rowley and Dr. Thomas Tanner (Cispus)
Randall, Washington

EPDA - USOE funding for pilot project in cooperative pre-service training of teachers.

SCHOOL PROGRAMS AND ACTIVITIES:

Interdisciplinary Outdoor Education Program
Shoreline School District #412
Northeast 18th Street and 20th Avenue N.E.
Seattle, Washington 98155

Bellevue Public Schools #310
102nd Avenue N.E.
Bellevue, Washington 98004

"Urban-Suburban Environmental Education Program"
Director, Jim Henning
Urban elementary and junior high students will explore environmental and intercultural problems and situations on a school-year basis,

utilizing class exchange, cooperative field trips, short-term resident outdoor school experiences. A cadre of teachers in environmental education and intercultural activities will be trained to serve as change agents in their particular school. The outdoor school will provide a neutral atmosphere in which attitudinal changes will be expected, as well as understanding of the ecological balance of nature. Project staff will work within the schools with children and teachers to help set up needed materials, laboratory stations, reference libraries and audiovisual materials. Inservice activities will include teaching methods and materials to present ecology and environmental concepts, a rational scientific approach to environmental problems, esthetic appreciation and understanding of the problems and potential rewards of intercultural education, and the development of an evaluation instrument.

Center for Environmental Studies, Title III
Mount Vernon School District #320
1219 E. Division
Mount Vernon, Washington 98273
Director: Richard Dixon, Pat Hayden

This center has been funded for the second budget year. Objectives for the coming year include the continued development and validation of the sequence of learning packages that will constitute the project's K-12 E.E. curriculum (LAP). Every effort is made to give visitors an opportunity to learn about the particular project components that most interest them. Interest seems to be equally divided among: the LAP as an instructional instrument and process, the Center as a component of an E.E. curriculum, and the project's training model for LAP writing and classroom implementation. The Project calls for training and additional 25 District teachers, beginning in August, 1972, and extending through June, 1973.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Gene W. Miller, Dean
Huxley College
Western Washington State College
Bellingham, Washington 98225

Central Washington State College
Dr. Ronald Boles
Department of Science Education
Ellensburg, Washington 98926

Mr. John G. Comis
c/o Dr. E. B. Welch
Department of Civil Engineering, Water and Air Resources
University of Washington
Seattle, Washington 98105

Did a study "Water Quality Study of Swamp and Coal Creeks, King County, Washington."

Huxley College of Environmental Studies
Western Washington State College
Bellingham, Washington 98225

SCRAP (Students Council for Recycling and Abating Pollution)
Mike Murray, Student Manager
Biology Department
Clark College
Vancouver, Washington 98663

Northwest E.E. Center (NEEC)
Mr. J. Anthony Angell, Director
Old Capitol Building
Olympia, Washington 98504

The Center is a Council member of the AAAS Commission in Science Education. In July 1970, the National Center for Educational Research and Development (USOE) granted the Center $67,000 for developing and testing a pilot program at the regional level involving six counties. It is hoped that this investment, augmented by state funds, will result in a project whose format can be adapted by any school district in the country. With endorsement from the area's professional and business groups as well as institutions of higher learning, the Center's goal is the inservice training of 15 to 20% of teachers within each district, to function either as district, school or classroom specialist. The major teacher training location is a 600 acre site on Whitbey Island in Puget Sound. Each district within the region whould have a district specialist by June 1973, and 60% of the individual schools will be similarly served. The NEEC site is being administered by the Office of Superintendent of Public Instruction under a lease from the State Department of Natural Resources.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

State Department of Ecology
P. O. Box 829
Olympia, Washington 98504

Washington Environmental Council
Thomas O. Wimmer, Sr.
119 South Main Street
Seattle, Washington 98104
(206) 623-1489

The Council is dedicated to the promotion of citizen, legislative, and administrative action toward providing a better environment.

Student Conservation Association, Inc.
Olympic View Drive
Rt. 1, Box 573A
Vashon Island, Washington 98070
(206) 567-4798

Since 1957, the Student Conservation Program has demonstrated that young volunteers of this nation can help to meet the urgent need for conservation work. The Student Conservation Association, Inc., a non-profit, educational organization, conducts the Student Conservation Program in cooperation with the National Park Service, U.S. Department of the Interior; the Forest Service, U.S. Department of Agriculture; and the Merck Forest Foundation. Student Conservation Program volunteers assist these agencies in providing important visitor services and carrying out needed conservation projects which they could not afford otherwise. At the same time the volunteer has the opportunity to expand his own awareness of the vital conservation of America's natural and historic heritage through actual field experience. This education in park and forest management is also of value for developing concerned citizens and for future careers in the fields of natural resources, public service and education.

Silverton-Waldheim Outdoor Education Laboratory
Don Schaefer, Director
Room 328 County Courthouse
Everett, Washington 98201

Outdoor Environmental Education
John Weber, Director
1113 E. Legion Way
Olympia, Washington 98501

Camp Waskowitz
William B. Weppler, Director
R. 1, Box 836
North Bend, Washington 98045

Earthstation 7
Environmental Works
1410 N.E. 40th Street
Seattle, Washington 98105
(206) 543-8700

ECOS (Environmental Committee on Survival)
3032 Dover Street
Longview, Washington 98632
Corinne Seal, President
(206) 423-9603

Olympic Natural History Association, Incorporated
David H. Huntzinger
Chief Park Naturalist
600 East Park Avenue
Port Angeles, Washington 98362
(206) 452-9235

The interpretive staff of the Association teaches and aids teachers in the use of the Environmental Study Area. It also endeavors to develop environmental awareness programs to be adopted in the local schools and civic organizations and clubs.

Sedro Wooley Program for E.E.
John Miles
Huxley College, WWSC
Bellingham, Washington

Pacific Northwest Environmental Education Institute
4426 Burke Avenue North
Seattle, Washington 98103

Spokane Consortium for E.E. c/o Mr. Charles Carpenter
Spokane Public School District #81
W. 825 Trent Avenue
Spokane, Washington 99201

Composed of Eastern Washington State College, Fort Wright College, Gonzaga University, League of Women Voters, Spokane School District #81, Whitworth College. Target area: Spokane River Watershed in Eastern Washington, and the Panhandle of Idaho.

Edmonds E.E. Council, District 15
Gail Cudmore, Chairman
Educational Services Center
3800 196th S.W.
Lynwood, Washington 98036

In the past the Council has been "a recommending body of environmental curriculum development and improvement."

Washington State Department of Ecology
Director: John Biggs
Olympia, Washington 98504
Section Head, Water Resources Planning: Edward Hammersmith

In 1971, the Washington State Legislature directed the Department of Ecology to develop and implement a comprehensive state water resources program. The development of such a program was begun in July, 1971, and has been structured for a four year schedule.

Puget Sound Group of the Sierra Club
Mike Ruby, Conservation Education Chariman
4128 Burke Avenue, North
Seattle, Washington 98103
(206) 583-2730

Kittitas, Yakima, Klickitat E.E. Council
c/o Intermediate School District #105
James Dolan, Chairman
Room 203 Courthouse
Yakima, Washington 98901
248-2521 Ext 231

Schools and school districts within the service area of Intermediate School District #105 have been conducting and working on individual E.E. programs and site development. Agencies within the community have organized an E.E. Council which promotes coordination of agency services for E.E.

RESOURCE MATERIALS AVAILABLE:

E.E. Guide, K-6
Vancouver Public Schools
Prepared by the Elementary Environmental Studies Curriculum Committee, 1970; 85pp.

Sedro Woolley School District
Robert Warnecke
Route 4, Box 220
Sedro Woolley, Washington 98284

USOE Project for curriculum development of K-12 program.

Environmental Education Guidelines
Dr. Frank Brioullet
Superintendent of Public Instruction
Old Capitol Building
Olympia, Washington 98504

Also: Population, by Pat King and John Landahl, Revised Edition, 1973. This pamphlet is related to the state Guidelines for E.E. in that it delineates the elements of population - one of the four basic areas loaded with issues referred to in the guidelines. In addition it contains the elements of decision making, which the guidelines stress.

"Fresh AIR". A Newsletter put out by Title III, Mount Vernon School District #320, 1219 E. Division, Mount Vernon, Washington 98273 (Center for Environmental Studies.

Marshall Outdoor Laboratory
Edmonds School District #15
3800 196th S.W.
Lynnwood, Washington 98036

"An Outdoor Education Curriculum Guide for the Marshall Outdoor Laboratory. Grade 5."

Department of Education - "State Plan for E.E." and "Guidelines for E.E. and Supporting Monographs."

State Parks and Recreation Commission, "Resident Youth Camp Brochure."

POSSIBLE RESOURCE PEOPLE:

Daniel Peterson
Seattle Central Community College

Familiar with Man and Environment - (Miami-Dade)

Dr. H. H. Webber
Huxley College
Western Washington State College
Bellingham, Washington 98225

John Putnam
E.E. Specialist
Seattle Public Schools
Administrative and Service Center
815 4th Avenue North
Seattle, Washington 98109

Dan Horn
North Seattle Community College

Energy futures and environmental impact statements.

Mr. Cliff Nelson, National Chairman
Association for Environmental and Outdoor Education
c/o Edmonds School District
Lynnwood, Washington

Mrs. Lynn Martin
Environmental Education
Department of Parks and Recreation
Washington Environmental Council
119 S. Main Street
Seattle, Washington 98104
(206) 623-1483

Steve Hogue
Curriculum Coordinator
Ferris High School
Spokane, Washington

Myron Redford
Vice President and Provost's Office
University of Washington
Seattle, Washington
(206) 543-6616

David R. Stroak
Assistant Professor of Biology and Education
Washington State University
Pullman, Washington 99163

Editor of Washington Science Teacher, advisor to Pullman chapter of Zero Population Growth. Has PhD in Science Education from Oregon State University. He taught science in Catholic high schools for eight years and from 1969-1971 was assistant professor of science education at the University of Texas at Austin where he was active in the university's Intermediate Science Curriculum Study and served as the first editor of Texas Science Teacher. The author of some 15 papers, he is especially interested in the development and evaluation of educational materials in biology and E.E.

Mrs. Vivian O. Lee
Member of NEA Task Force on E.E.
School Nurse - teacher
Renton Public Schools
Seattle, Washington

Richard Jones
Program Director
Evergreen State College
Olympia, Washington

Dr. Russell F. Christman
Special Assistant to the Provost for Environmental Affairs
Associate Professor of Chemistry
236 Aerospace Research Lab, F1-10
University of Washington
Seattle, Washington 98105
(206) 543-1812

Steve Burdick
Environmental Services
P. O. Box 15309
Seattle, Washington 98115
(206) 543-8700

Member of Ecology Center Communications Council.

Brock Evans

An attorney, he is the northwest representative for the Sierra Club, and Federation of Western Outdoor Clubs. He is a founder and director of the Washington Environmental Council.

Annette Tussing

Winner of citizen environmentalist award from Rocky Mountain Center on Environment. She has devoted her talents as a writer, photographer, and lecturer to preserving the Hells Canyon section of the Middle Snake River in Idaho. Wide circulation of her articles and photographs have informed people throughout the country of the need to preserve the unique beauty and wild character of the Snake.

Dr. Al Haugerud
Director of Curriculum
Issaquah School District

Consultant who helped write 1971 E.E. Guidelines for Washington Department of Public Instruction, Olympia, Washington.

Dr. Theodore Kaltsounis
Associate Professor, College of Education
University of Washington

Consultant who helped write E.E. Guidelines for the Washington Department of Public Instruction, Olympia, Washington.

Dale Stradling
Department of Education
Eastern Washington State College
Cheney, Washington

Consultant who helped write E.E. Guidelines for the Department of Public Instruction, Olympia, Washington.

Mike Ruby
Environmental Affairs Specialist
Mayor's Office
City of Seattle, Washington

D. R. Eberhart
Director, Resource Planning Center
Professor of Geography
Central Washington State College
Ellensburg, Washington 98926

John Putnam, Specialist, E.E.
Seattle School District #1
815 4th Avenue North
Seattle, Washington 98109

David Hicks
Professor of Biology
Whitworth College
Spokane, Washington 99218
(509) 489-3550 Ext 335

Teaches in the College's Environmental Studies program, has had extensive experience in wilderness travel, survival, alpine ecology.

Cliff Nelson, National Chairman
Association for Environmental and Outdoor Education
c/o Edmonds School District
Lynnwood, Washington

WYOMING

STATE E.E. CONTACT:

George Bohl, Coordinator, Math/Science
State Department of Education
Capitol Building
Cheyenne, Wyoming 82001
(307) 777-7621

Robert Legoski, Director
Conservation Center for Creative Learning
863 Sweetwater
Lander, Wyoming 82520
(307) 332-4644

STATE PLAN ACTIVITIES:

Lander, Wyoming, appears to be the center of all activities. Bob Legoski is the director. He has been working in conjunction with Mr. S. J. Starrett of School District #1, Fremont County. They are also working with Allen Wheeler of the State Department of Education and Mr. Vincent Sendt, formerly of the State Department, but now working in the Science Department at the University of Wyoming. The four seem to be the catalysts in any or all environmental education programs in the State.

These people have been working on a wide-range State plan for three years. Although the Conservation Center in Lander has been funded under Title III, they presently have no State funds at their disposal.

There appears to be a vast amount of state-wide community interest, although as was mentioned above, there is no funding.

The plan they are attempting to develop is primarily based on conservation education and is concerned with developing a discovery oriented inter-disciplinary environmental education program.

State Laws or Policies State Board of Education Resolution directs the State Department of Education ". . . to prepare procedures and guidelines for local curriculum development by the public schools in environmental and ecological education for kindergarten through grade twelve."

Educational Agency - Activities and Responsibilities Attempts have been made to set state goals and tie state, local, and federal program development to these goals. The Department encourages expanded attention to comprehensive environmental education activities in local districts through department workshops, publications, etc.

Resources Agency - Activities and Responsibilities As part of the Information-Education Division, the Wyoming Game and Fish Commission has been active for about 15 years in presenting information on wildlife ecology and interactions of resources to the schools. Wildlife ecology is presented via a wildlife mobile exhibit. The Department of Agriculture is involved in a similar program. Part of the funds collected for hunting and fishing license fees is placed in the Information-Education budget of the Game and Fish Department to enable them to present programs of conservation education to children and adults.

E.E. PROGRAMS FUNDED FOR 1972:

Joe Lutjeharms, Director
Laramie County School District #1
School Administration Building
Cheyenne, Wyoming 82001

Development of a process curriculum for the community.

SCHOOL PROGRAMS AND ACTIVITIES:

KOLAB (Kemmerer Outdoor Lab)
Billie L. Mowry, Director
School District #1
Kemmerer, Wyoming 83101

Cheyenne Eco Lab
Dr. Bill Edwards
School District #1
Cheyenne, Wyoming 82001

Jackson Summer Outdoor School
Ted Majors
Jackson High School
Jackson, Wyoming

Big Piney Outdoor Lab
Bob Peterson, Superintendent of Schools
Big Piney, Wyoming

Environmental Workshop - Summer 73
Dr. Ron Breitmiser
University of Wyoming
College of Education
Laramie, Wyoming

National Outdoor Leadership School
Paul Petzoldt
Lander, Wyoming

University Lab School Outdoor Program
Dr. Lawrence Walker
University of Wyoming
College of Education
Laramie, Wyoming

Powell Outdoor Camping Experience
Harold Moewes
School Administration Building
Powell, Wyoming

Riverton Outdoor Camping Experience
Neal Carroll
School District #25
Riverton, Wyoming

Laramie County
School District No. 1
School Administration Building
Cheyenne, Wyoming 82001

Received FY 1971 Title III Funds allocated to E.E. - $59,002.
"ECO Curriculum Development and Learning Laboratory"

A curriculum development and learning laboratory and staellite sites will be established to develop and present an environmental education curriculum for Grades K-12 and an environmental education curriculum for handicapped children. The curriculums will emphasize knowledge of environmental problems, methods of solving these problems and will be aimed at motivating students to seek solutions to environmental problems. Curriculums will be developed by instructional teams not only from the usually accepted environmental disciplines, but also from the social and behavioral sciences. The elementary curriculum will emphasize integration of environmental education instruction into the present arts, sports, communication skills, mathematics, and social sciences programs. Mini-courses will be developed for the secondary level. Two elementary curriculum guides have been developed.

Lander Conservation Center for Creative Learning
Robert Leboski
Junior High School
Lander, Wyoming

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Wyoming Outdoor Coordinating Council, Incorporated
Thomas A. Bell, Executive Director
P. O. Box K
Lander, Wyoming 82520
(307) 332-5908

The Council seeks to coordinate actions and interests of conservation and environmental groups, and to provide the public with information on programs and developments affecting the environment and natural resources. The Council provides educational services as well as takes political and legal action to secure a quality environment when it becomes necessary.

Environmental Research Institute
Phyllis J. Farrell
Administrative Assistant
P. O. Box 156
Moose, Wyoming 83012
(307) 733-3387

The Institute is a non-profit professional organization of scientists whose purpose is to explore the cause and effect relationships between man and his environment. Activities include research, education, and conservation efforts.

Hilton M. Power
Wyoming Committee for Community Environmental Awareness and Education
Division of Adult Education and Community Service
Laramie, Wyoming 82070
(307) 766-5249

Conservation Center for Creative Learning
Mr. Robert Legoski, Director
863 Sweetwater
Lander, Wyoming 82520
(307) 332-4644

School District #1
Fremont County
Mr. S. J. Starrett
Lander, Wyoming 82520
(307) 332-3792

Valley Center for Ecology (near Cody)

Thorne Ecological Institute holds sessions of its FLET program here. Field Ecology for Elementary Teachers is a comprehensive program under development for training of elementary teachers in field ecology.

Department of Health and Social Services
State Office Building
Cheyenne, Wyoming 82001

Department of Economic Planning and Development
210 W. 23rd Street
Cheyenne, Wyoming 82001

RESOURCE MATERIALS AVAILABLE:

Outstanding Local Programs

Kemmerer Outdoor Laboratory; Cheyenne Ecology Lab. Outdoor education experiences in Powell, Riverton, and University Lab School. The Game and Fish Department is involved with conservation camps for Boy and Girl Scouts and 4-H youngsters.

Resident Outdoor Programs

Three are operating at the present time under sponsorship of the Wyoming Game and Fish Department, the National Outdoor Leadership School, and Teton Science School.

High Country News
Lander, Wyoming
Tom Bell, Editor

This publication deals with conservation education.

Department of Education
Understanding Ecology

Game and Fish Department
"Our Feathered Friends"
"Our Furry Friends"
"Our Big 'N Wild Friends"
"Guarding Our Heritage"
"Our Finny Friends"
"Land is Life"